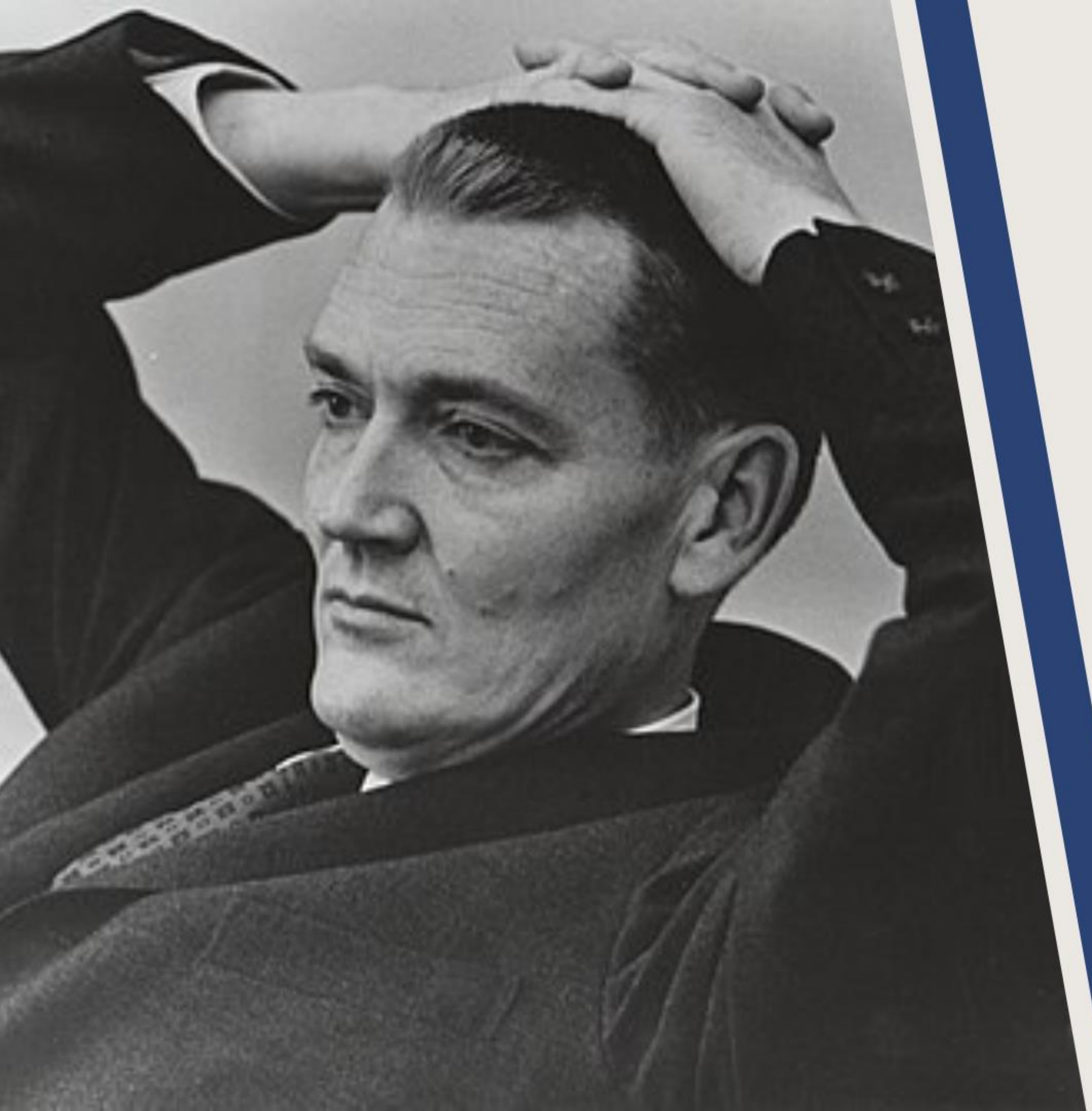

Bogleheads University

October 12, 2022

Faculty: Rick Ferri, CFA, Mike Piper CPA, Christine Benz, Allan Roth, MBA, CFP, James Dahle, MD

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Center for Financial Literacy

Disclosures

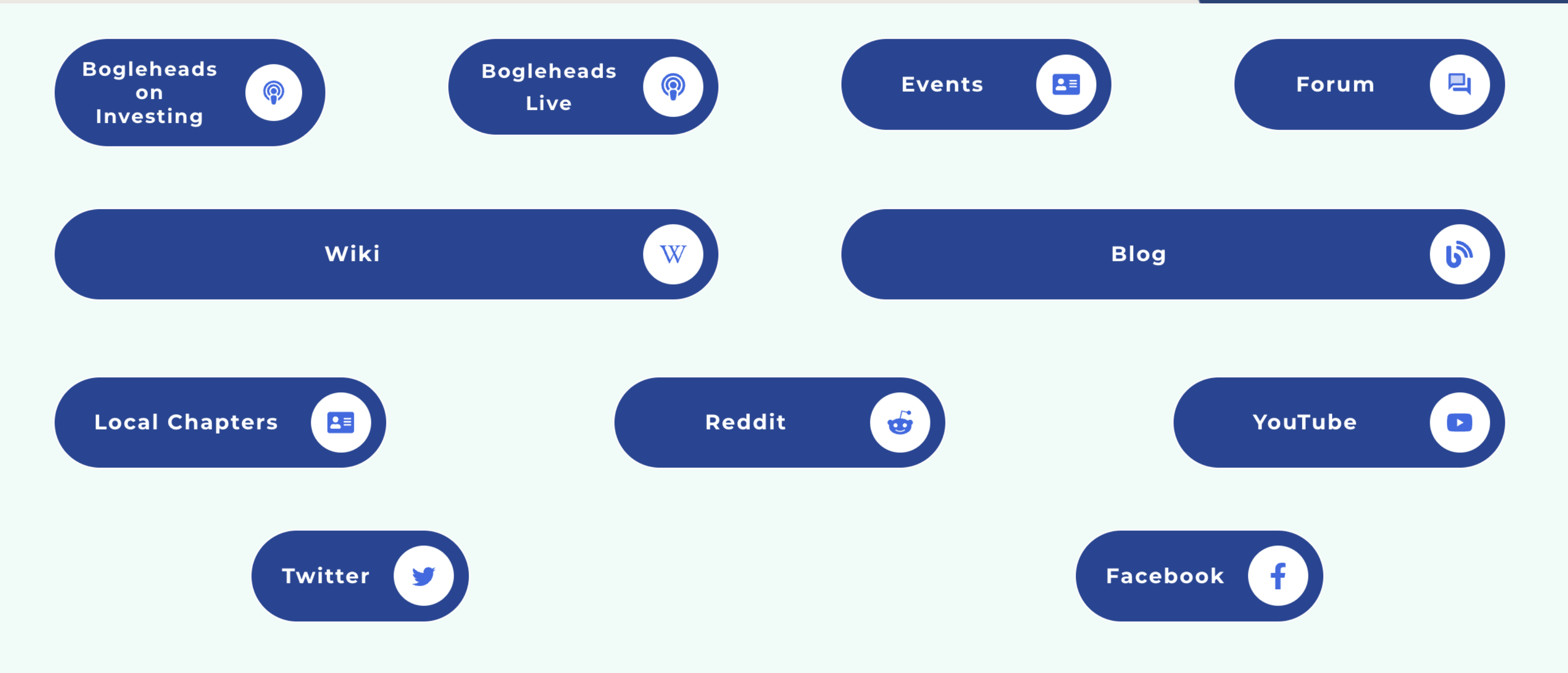
- All faculty members are published authors
  - If you buy their books, they make money
- All faculty members either own or work for profitable businesses
  - We’ll do our best not to tell you what they are

Introducing Boglecenter.net

- Bogleheads is not just a forum anymore

Boglecenter.net is the Hub

- Podcast
- Virtual and live events
- Forum
- Wiki
- Blog
- Subreddit
- Youtube channel
- Social Media



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Bogleheads University

1:00 Introduction

1:05 # 1 Develop a workable plan – Jim Dahle

1:20 # 2 Invest early and often – Christine Benz

1:35 # 3 Never bear too much or too little risk- Allan Roth

1:50 # 4 Diversify – Christine Benz

2:00 10 minute Break # 1

2:10 # 5 Never try to time the market – Rick Ferri

2:25 # 6 Use Index Funds When Possible – Rick Ferri

2:35 # 7 Keep Costs Low – Allan Roth

2:45 # 8 Minimize Taxes - Mike Piper

3:00 10 minute Break # 2

3:10 # 9 Invest with Simplicity – Mike Piper

3:20 # 10 Stay the course – Jim Dahle

3:30 Q&A with the 5 faculty members (Hold questions)

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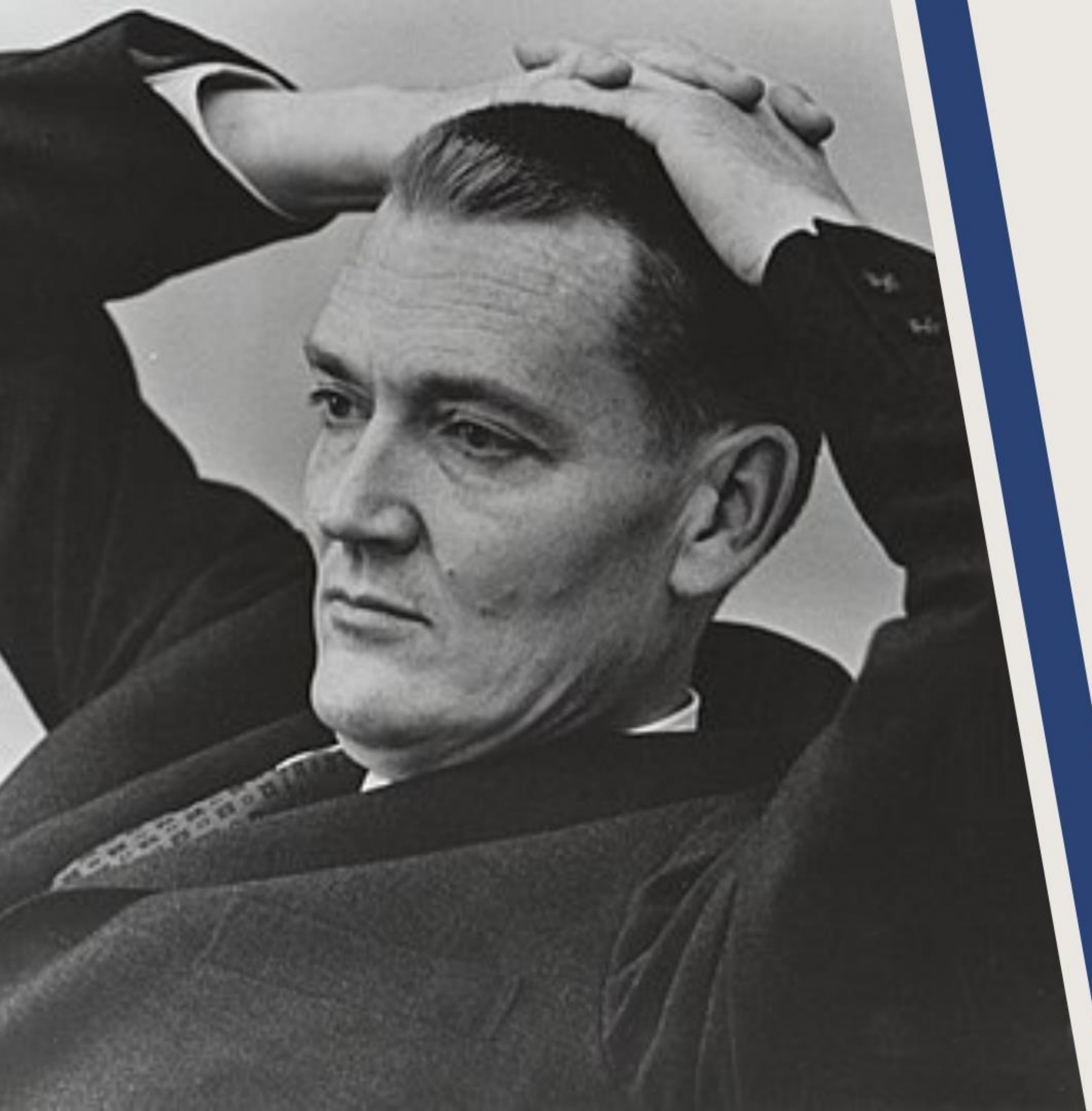

1
Develop a Workable Plan

James Dahle, MD

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Credibility Slide

- Emergency physician by education and training
- Boglehead since 2004 (net worth zero to FI in 14 years)
- 25th most prolific poster on the forum (used to be 8th)
- Took the Boglehead philosophy to my profession via a successful online business
- Author of four books on personal finance, investing, and asset protection and multiple book chapters
- Created the most widely read physician-specific investing website in the world
- Podcaster, conference creator

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1 Develop a Workable Plan

- Single most important piece of advice I can give
- Write your plan down
  - Forces you to actually do it
  - Exposes gaps in your knowledge and planning
  - Can be referenced later
- Get professional help if you need it
- Financial planning is relatively cheap
  - But far more valuable than asset management

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What’s In a Financial Plan?

- More than just an Investing Policy Statement

1. Student Loan/ Debt Reduction Plan
2. Insurance Plan
3. Housing Plan
4. Spending Plan
5. Investing Plan
6. Estate Plan
7. Asset Protection Plan

- A living, changing, working document

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Zeroing in on the Investing Plan

1. Set goals
2. Choose accounts for each goal
3. Determine asset allocation for each goal
4. Select investments
5. Determine rules for changes and maintenance

Set Goals

1. Set your goals
   - It's okay if they change
   - SMART
   - Net worth, income, savings rate
   - "Our investments will provide an income of $100,000/year (2006 dollars) while still growing at the inflation rate providing us financial independence by June 28, 2030."
   - "We will be worth $1 million by June 28, 2017."
   - "We will have the equivalent of four years of in-state tuition at BYU in each 529 by the time each child turns 18."
   - Define "enough" so you recognize it when you get there

Where to Invest

2. Choose investing account(s) for each goal
    - Retirement: 401(k)s, 403(b)s, 457(b)s, IRAs, Roth IRAs, Defined Benefit Plans, TSP, Taxable accounts
    - Education: Coverdell ESAs, 529s, UTMAs, Taxable
    - Health care expenses: Health Savings Account
    - A big purchase: Taxable
    - Emergency fund: Taxable

- Recognize that these accounts and ratios will change over the years
- Tax diversification is a good thing, but not worth paying much in extra tax

Top Down Approach to Investing

3. Choose asset allocation for each goal

- Most important determinant of investing return (but not success)
- Take on enough risk to beat inflation long-term and meet goals
- Don’t take on more risk than you can handle (Price is Right model)
- Include at least 3 asset classes.
  - Significant benefit in going to 7 asset classes
  - Beyond 10 you’re adding complexity for little benefit
- Avoid analysis paralysis. Pick something reasonable and stick with it
- Okay to make adjustments but beware performance chasing
- Spend some time on asset location

Choose Investments

4. Choose investments to fulfill your asset allocation based on availability in accounts

- Can be very easy
  - 25% of my portfolio is US stocks. It’s all in the Vanguard Total Stock Market ETF with one tax loss harvesting partner (iShares TSM) in the taxable account
- Can be very difficult too
  - TIPS ETF, Individual TIPS, I Bonds
  - Direct real estate investing, private equity, cryptoassets
- Favor broadly diversified, low cost index funds
  - Ideal is one fund per asset class
- Consider a simple fund of funds if only investing in retirement accounts and a good fund(s) is available in every account

Set up Rules

5. Determine rules for changes and maintenance of the plan

- One of the most important parts of your investment plan
- Things to include:
  - Rebalancing policy
  - How investments will be selected
  - Criteria for adding/subtracting new asset classes
  - How will asset allocation change over time
  - Bear market behavior
  - Waiting period for changes

Set up Rules - Examples

- "No asset class will represent more than 30% or less than 5% of our portfolio"
- "We will rebalance our asset allocation as frequently as necessary using the 5/25 rule using new investment money as much as possible. If selling in a taxable account (or selling an investment with significant trading costs) is required to rebalance, this may be performed no more than once per year."
- "Any change to these percentages or change in funds used will require a 3 month waiting period. Development of any new asset class or new funds allowing us to invest in an asset class such as international small or international value stocks will require a 3 month waiting period prior to transferring funds."

Recap

1. Set **GOALS**
2. Choose **ACCOUNTS** for each goal
3. Determine **ASSET ALLOCATION** for each goal
4. Select **INVESTMENTS**
5. Determine **RULES** for changes and maintenance

Christine Benz

- Member of Bogleheads Board of Directors
- Director of Personal Finance, columnist, and podcaster for renowned and highly respected website
- Previously director of mutual fund analysis (supervising 35 mutual fund analysts)
- Author of two investing books
- Avid cook, political junkie, and long-suffering Chicago Cubs fan

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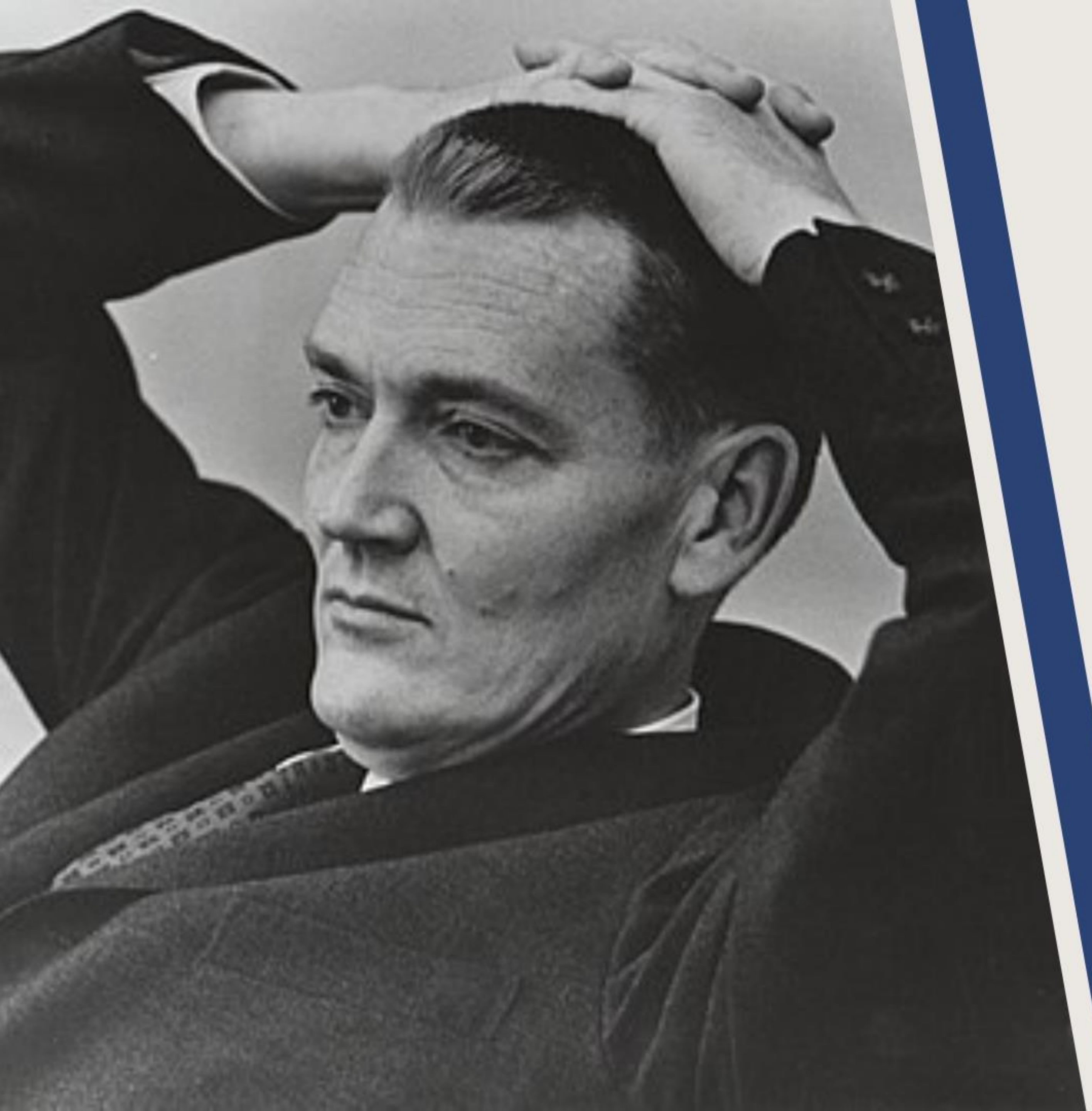

2
Invest Early and Often

Christine Benz

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Jack Bogle said it best:

"Investing is a virtuous habit best started as soon as possible."

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Successful investors heed Bogle's advice by:

- Starting investing early (even if it means starting small)
- Investing regularly and systematically

Your ultimate investment return is affected by 3 key factors

- How much you invest
- How long you invest
- The rate of return that you’re able to earn

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You exert complete control over just two of them:

- How much you invest
- How long you invest
- ~~The rate of return that you're able to earn~~

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The difference an early start makes

- Sami starts out investing when she gets her first job at age 24
- She contributes $200/mo to Vanguard Total Stock for 40 years, earning an 8% annualized return

The difference an early start makes

- Jeremy waits until he’s 34 to start investing
- He contributes $400/mo to Vanguard Total Stock for 30 years, earning an 8% annualized return

In the end

- Sami’s total contribution: $96,000
- Sami’s balance at age 64: $702,881
- Jeremy’s total contribution: $144,000
- Jeremy’s balance at age 64: $600,129

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If starting early matters so much, which is better: investing a lump sum or dollar-cost averaging?

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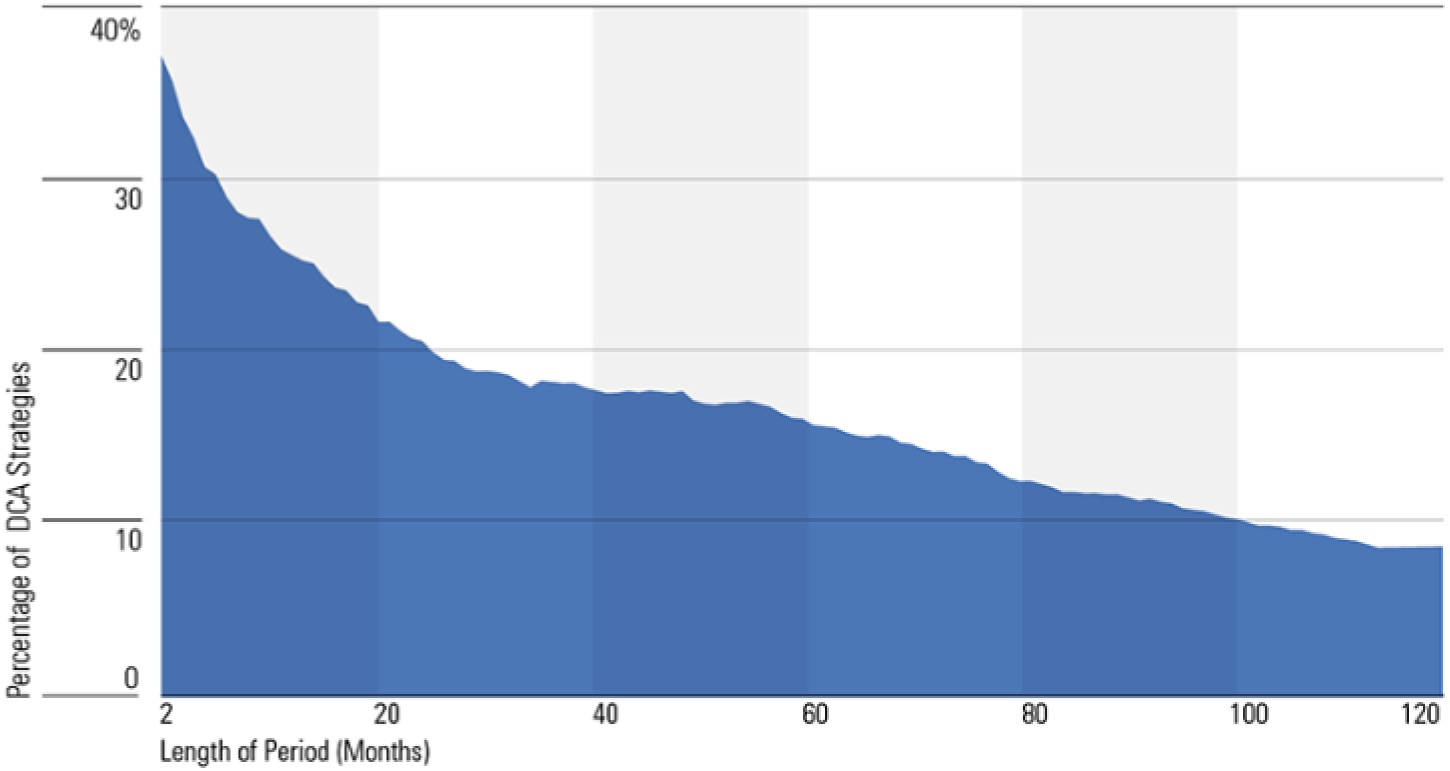
Answer: A lump sum is better for long time horizons

Percentage of Cases in Which a DCA Strategy Resulted in Higher Final Wealth Than LSI as a Function of the Period's Length (Jan 1926 Through August 2019)



Source: Morningstar Direct, authors' calculations.

But there are a few problems with that conclusion

- Most of us don’t have a lump sum to invest!
- Instead, we have a portion of our paychecks
- DCA’ing limits the chances of investing at precisely the wrong time

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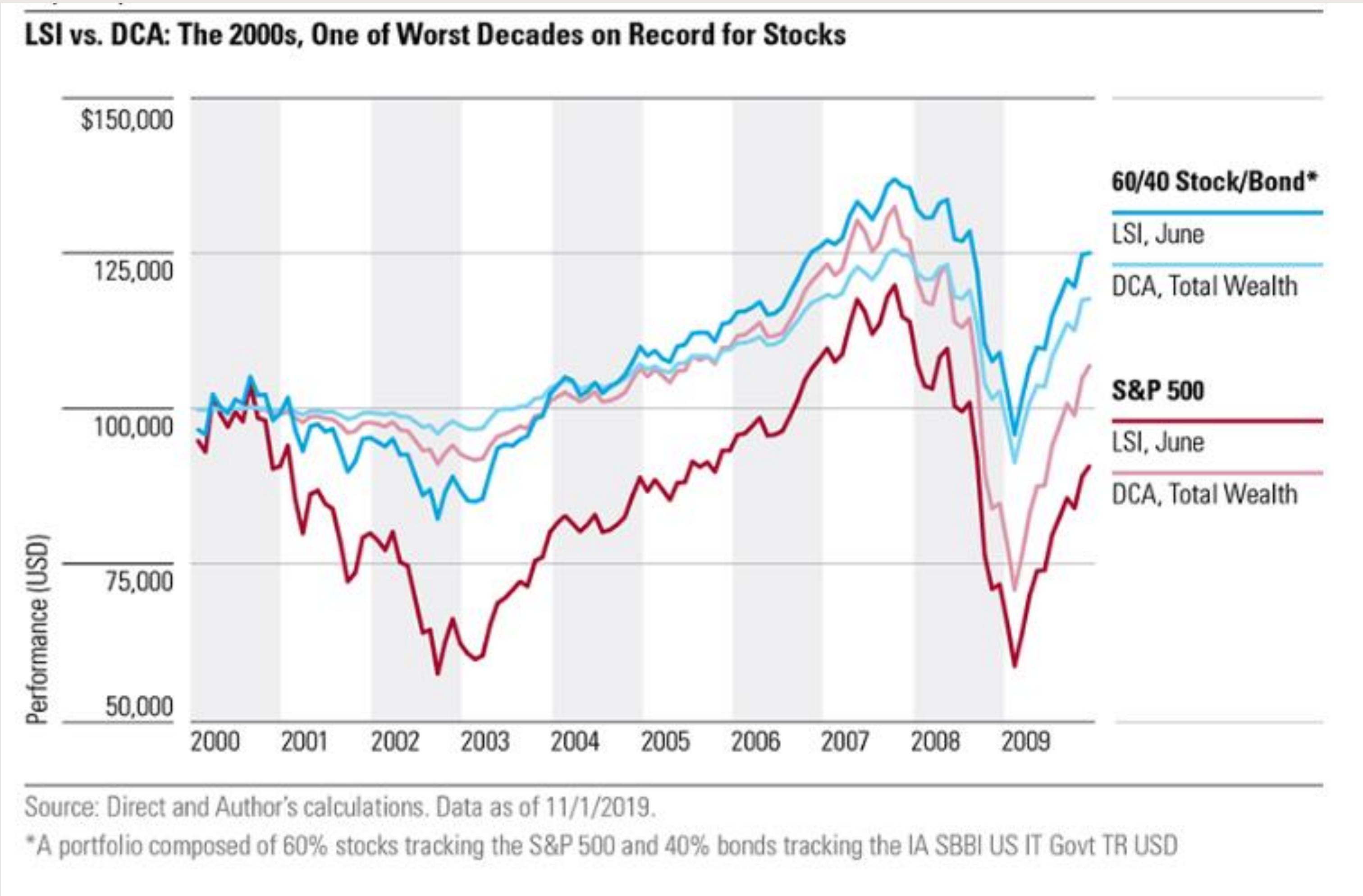
Dollar-cost averaging can smooth out the bumps of a rough market



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And perhaps most important, DCA'ing instills discipline and allows you to be hands-off

- Can invest on autopilot with company retirement plan, IRA, taxable account, HSA, 529…
- Helps ensure that you participate the market's good days

Staying Invested: Missing the Best Days

25 years, Initial $1,000 investment, S&P 500 Before Fees

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Conclusions

- Getting started, even with a small amount, often beats starting later with a larger amount
- Lump-sum investing may beat dollar-cost averaging over long periods of time, but most of us don’t have a lump sum to invest!
- Investing fixed sums at regular intervals makes it easy to save, helps minimize regret of investing at precisely the wrong time

Allan Roth, MBA, CPA, CFP

- Founder of a fee-only (hourly) financial advisory firm
- 25 years of experience in corporate finance
- Corporate finance officer of two multibillion dollar companies
- Consultant
- Author of an investing book
- Investment and financial columnist for AARP, ETF.com, and Financial Planning Magazine
- “The Mole”

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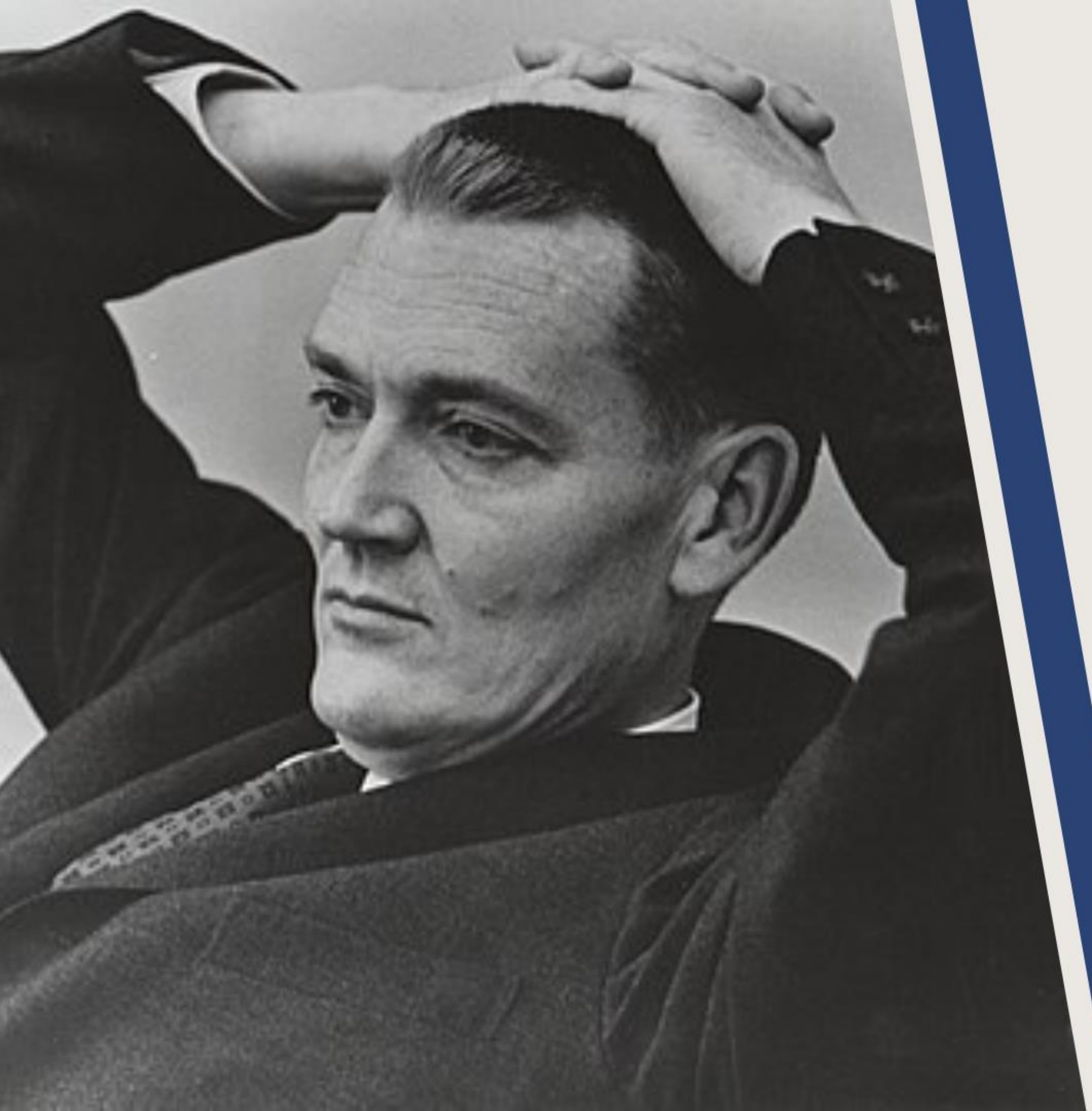

3
Never Bear Too Much or Too Little Risk

Allan Roth, MBA, CPA, CFP

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Never bear too much or too little risk

Allan Roth

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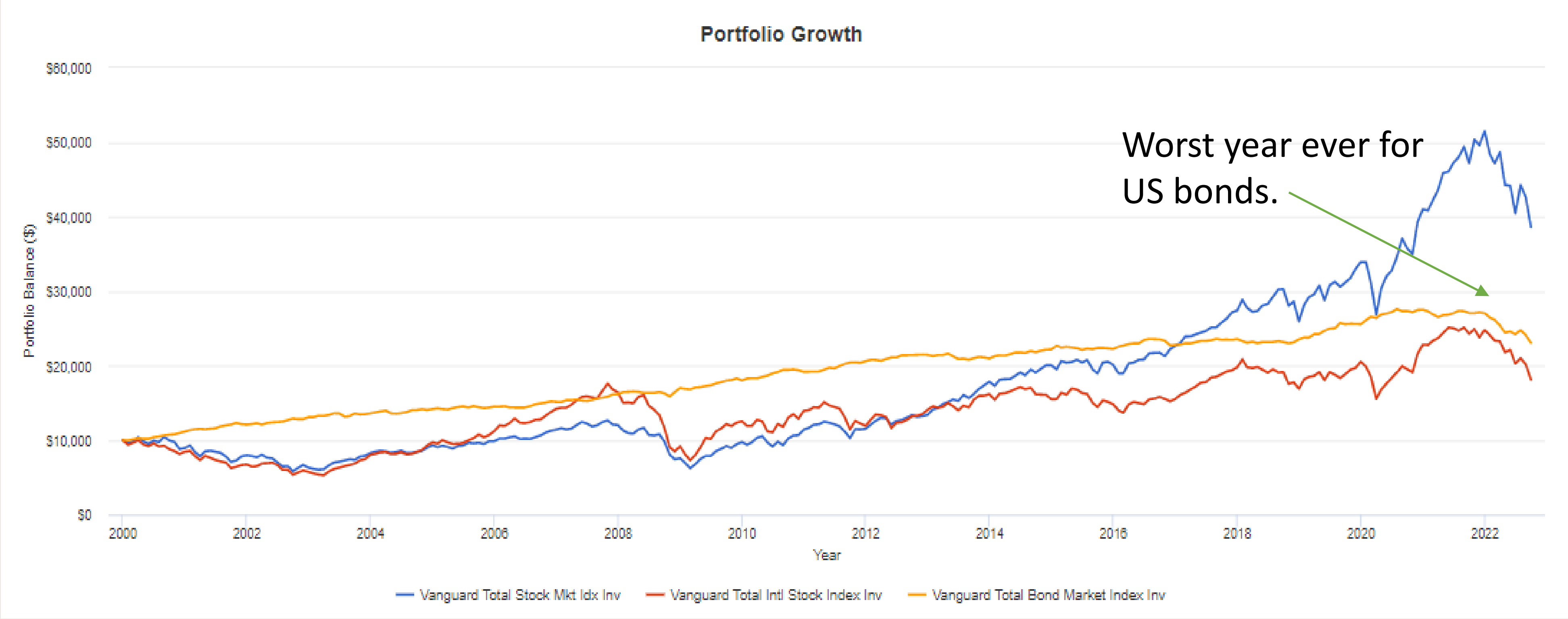
Stocks are riskier than bonds

Index Fund Total Returns 12/31/99 – 9/30/22



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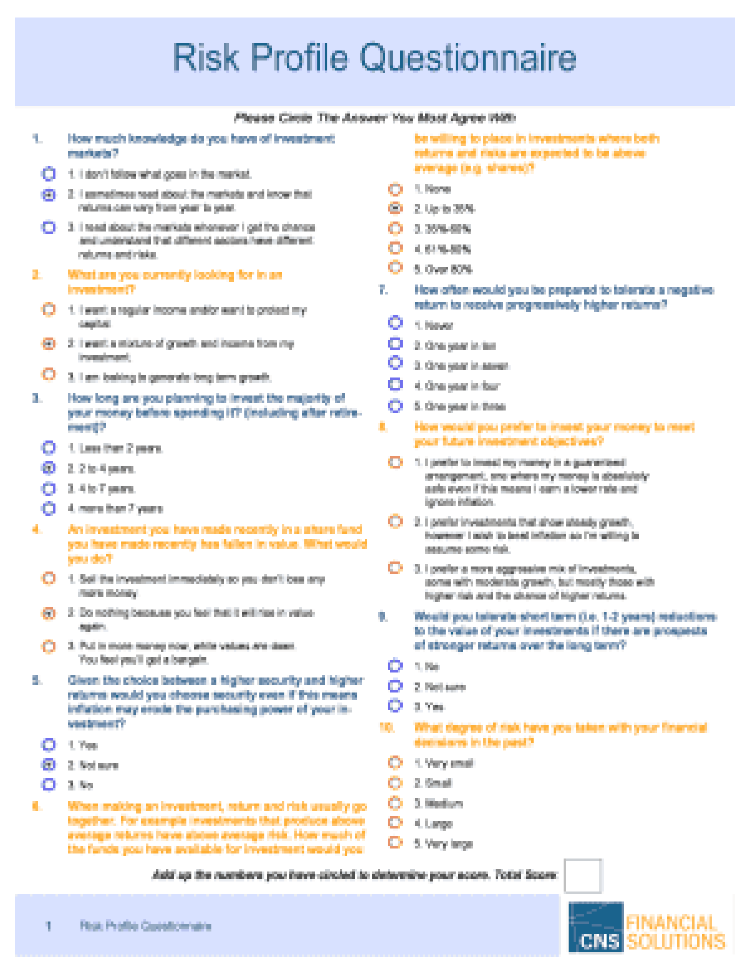
Risk profile questionnaires

Jason Zweig says they are worthless but he's wrong!



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They are worse than worthless – they are dangerous!

Two problems with risk profile questionnaires

1. The way we feel about risk is not stable (smaller of the two problems).

2. They don't measure one's NEED to take risk.

Risk profile questionnaires I take have me between 70% and 140% in equities (margin account). Guess where my target is?

My Risk Profile Results from the Best Questionnaire I've Found – 80% Stocks

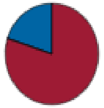
Q. From September 2008 through November 2008, stocks lost over 31%. If I owned a stock investment that lost about 31% in three months, I would . . .
(If you owned stocks during this period, please select the answer that matches your actions at that time.)

- ❑ Sell all of the remaining investment
- ❑ Hold on to the investment and sell nothing
- ❑ Sell some of the remaining investment
- ✓ **Buy more of the investment**

My stock index funds lost 35% in 33 days between 2/19/20 and 3/23/20

Investor Questionnaire results

Based on your answers, here's your suggested asset mix:



Bonds	20.0%
Stocks	80.0%

You may find that the suggested mix doesn't fit your needs exactly. You may be a more aggressive or conservative investor than the questionnaire suggests. If so, you can adjust your asset mix as needed.

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Feelings about Risk

"I've got a very long-term investment horizon so I'm comfortable being 100% in stocks."

12/31/21

"This has never happened before. I'm going to all cash until things settle down."

9/30/22

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The $100 billion bet with a 99% probability of winning.

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Probabilities and Consequences

- How would you feel if your stocks lost 50%?
- How would you feel if:
  - You couldn’t send your daughter to that prestigious college for which she worked so hard to be admitted?
  - You had to continue working another decade in that high stress job working for that awful boss?
  - You couldn’t buy that house on the lake you and your spouse always wanted?

“When you’ve one the game – quit playing.” William Bernstein

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Willingness to take risk

- Discuss consequences
- Get in touch with feelings
- Test ability to rebalance in a bear
  - What people say . . .
  - . . . versus what people do (last few bears).
  - “I’ve learned my lesson and won’t do it again.”

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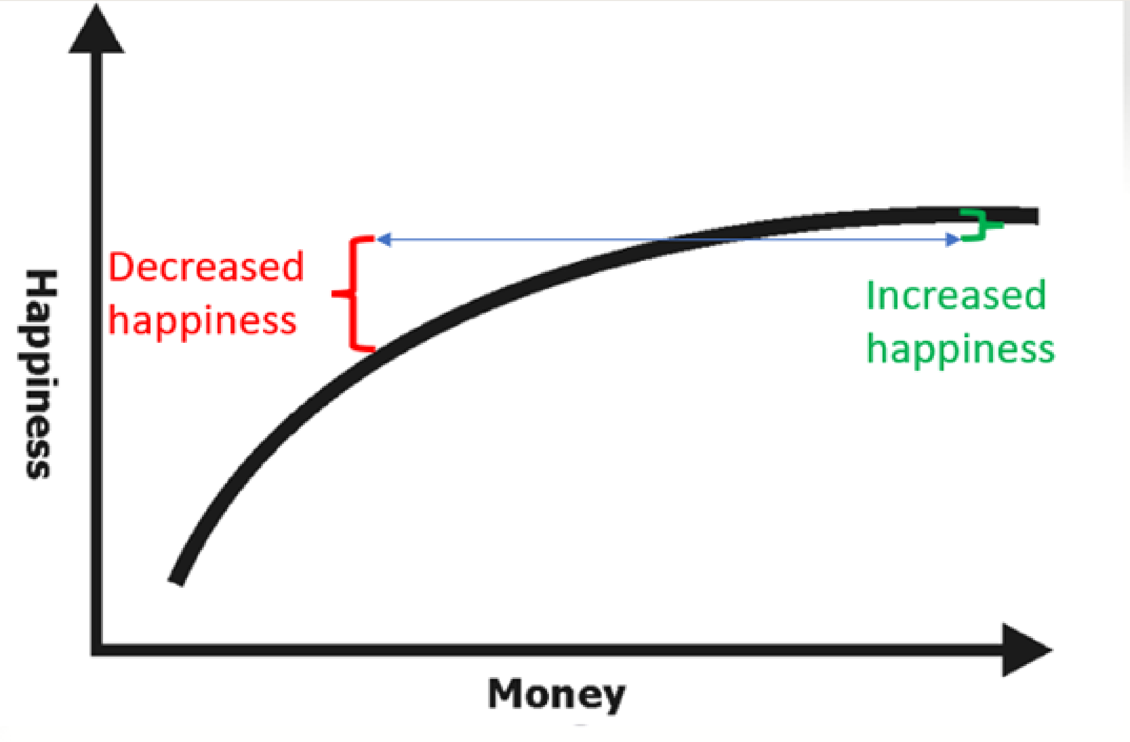
Money and Happiness

Money doesn't buy happiness but lack of money will buy misery.



See work by Jonathan Clements

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How much risk should you take?

- A 65 year old with $2 million portfolio, spends $50K (above SS) per year with high willingness to take risk.
- Above but with $1 million portfolio.
- Above but with low willingness to take risk.
- A 45 year old saving for retirement (high need) with:
  - High willingness to take risk
  - Low willingness to take risk
- A 25 year old saving for a house down payment to be used in two years.
- A 25 year old who just inherited $2 million.

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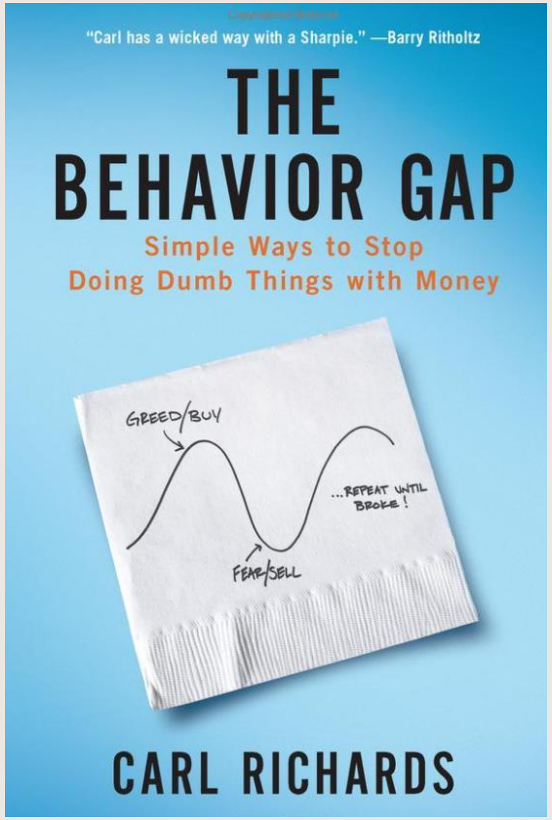
Concept of taking risk

Risk

		Need	
		High	Low
Willingness	High	Aggressive	Conservative
	Low	Conservative	Conservative

Behavioral aspects of risk

- **Recency bias**
  - Last year, I'm working to have clients take on less risk.
  - Now, I'm often working to have clients take on more risk.



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Never take uncompensated risk

- Since 1926, what has had the higher return?
  - ➢The average stock
  - ➢One-year Treasury bills

- 96% of stocks have an average return of the T-bill.
- 4% of the stocks account for the entire excess return.
- Identifying those 4% is virtually impossible.
- I owned Zoom even before I knew what it was.

What about asset classes with low or negative correlations to lower risk?

- Owning some assets that zig when the market zags.

  Alternative assets

  - ➢Commodity futures
  - ➢Foreign currency futures
  - ➢Options
  - ➢Inverse S&P 500 funds
  - ➢Triple levered inverse S&P 500 funds
  - ➢Gambling half of your net worth in Las Vegas.

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Low or negative correlations isn't enough

Also need a decent positive expected return – below are two asset classes that can sometimes have lower correlations and positive expected returns.

- REITs
- Precious metals and mining funds

Both, especially the latter, have huge downsides.

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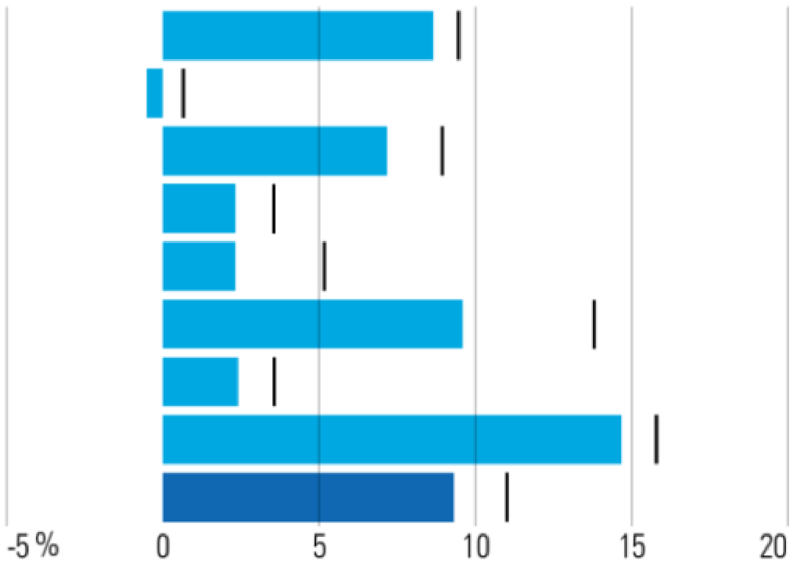
The penalty for not knowing your risk?

Exhibit 1 The Gap by U.S. Category Group (10-Year Returns)

U.S. Category Group	Investor Return %	Total Return %	Gap
Allocation	8.65	9.43	-0.77
Alternative	-0.52	0.65	-1.16
International Equity	7.18	8.93	-1.75
Municipal Bond	2.33	3.54	-1.21
Nontraditional Equity	2.32	5.19	-2.87
Sector Equity	9.59	13.84	-4.25
Taxable Bond	2.41	3.58	-1.17
U.S. Equity	14.67	15.86	-1.19
Overall	**9.31**	**11.04**	**-1.73**



Source: Morningstar Direct. Data as of Dec. 31, 2021. Excludes commodities category group. Gap numbers may not match differences in returns because of rounding.

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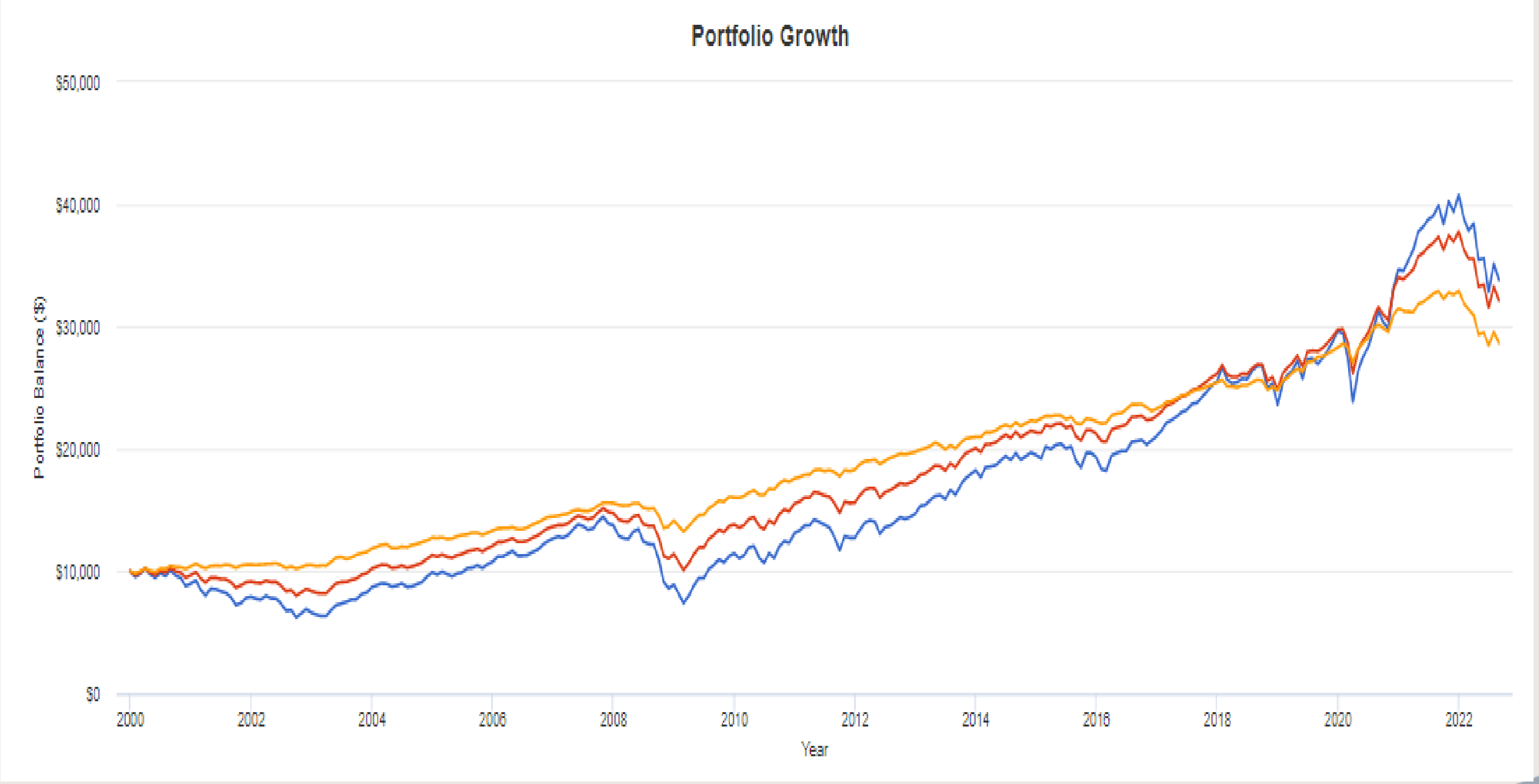
Risk

- Old paradigm – If you can't be right, at least be consistent.
- New paradigm – Being consistent is even more important than being right.



90% stock
60% stock
30% stock

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Conclusion

- Pick an asset allocation to match your willingness and NEED to take risk. Imagine the pain of the consequences if things don't work out.
- Think of your allocation as a binding contract to which you must stick within a, say, 6 percentage point tolerance or you are in breach of contract.
- I enforce based on guilt.
- When I disagree with a client, I negotiate.

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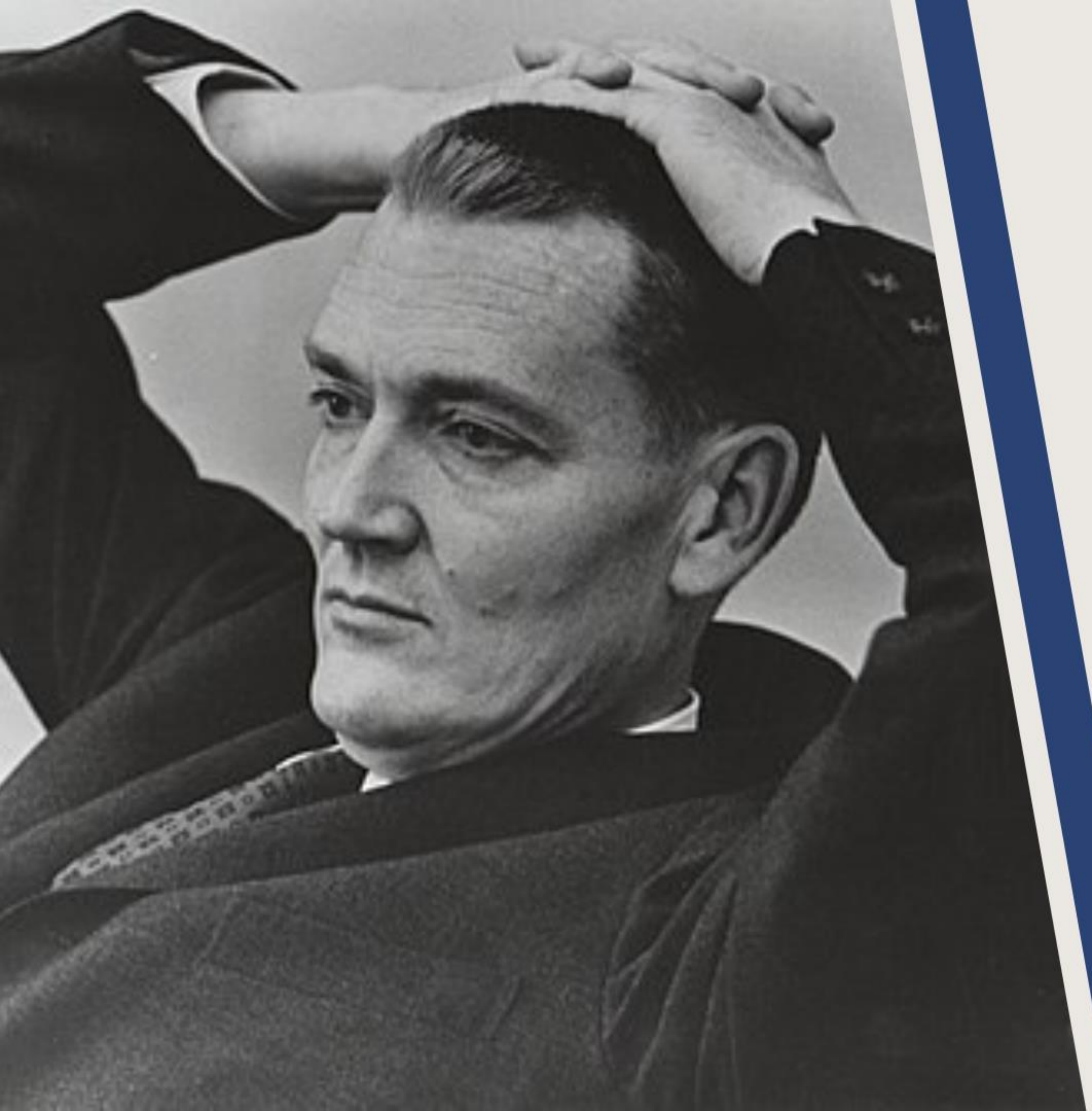

4
Diversify

Christine Benz

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Jack Bogle said it best:

"Absolutely no one knows what the stock market is going to do tomorrow, let alone next year. Nor which sector, style, or region will lead and which will lag behind. Given this absolute uncertainty, the most logical strategy is to invest as broadly as possible…"

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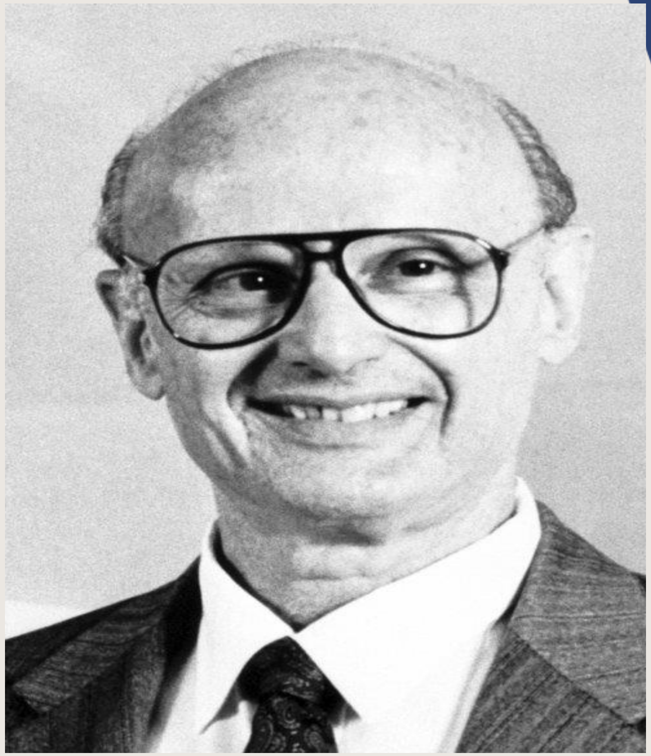
Nobel Laureate Harry Markowitz said it too



"A good portfolio is more than a long list of good stocks and bonds. It is a balanced whole, providing the investor with protections and opportunities with respect to a wide range of contingencies."

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Key benefits of diversification

- Helps ensure that *something* in your portfolio is performing reasonably well all the time—especially important in drawdown mode
- Guarantees that you won’t choose precisely wrong (asset class, specific investment, time period to invest in, etc.)
- Reduces volatility of the portfolio, which may make it easier to stick with

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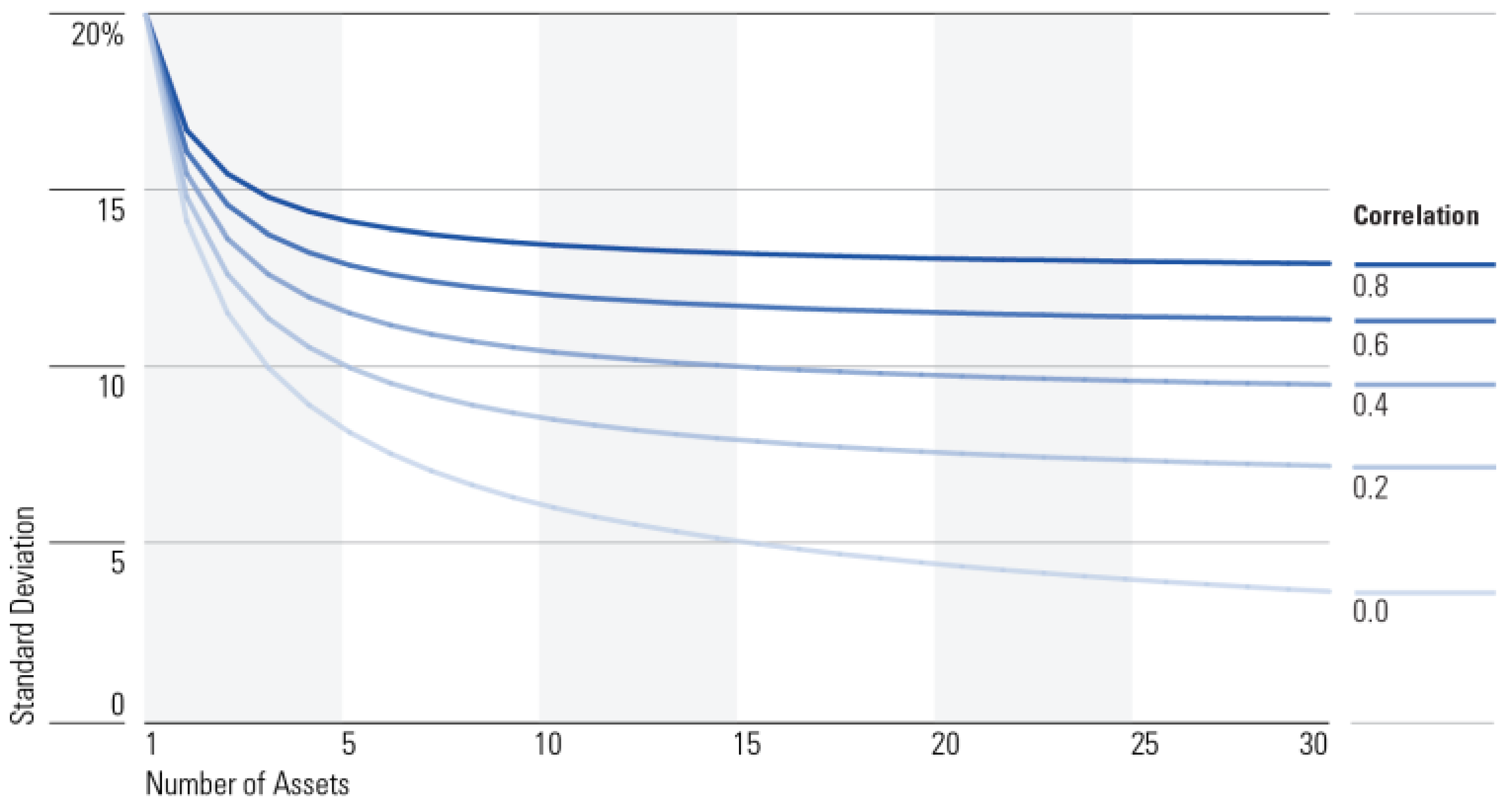
Diversification’s impact on volatility



Source: Morningstar analysts.

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Multiple ways to diversify

- By asset class (stocks, bonds, cash, real estate)
- *Within* asset class (mutual fund or ETF v. individual securities)
- Across account types (tax-deferred, taxable
- By time period (DCA'ing v. lump sum)

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Bonds have often behaved differently than stocks

Source: Morningstar Direct. Data as of 12/31/2021.

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But remember: It’s diversification, not “de-worsification”

- There are limits to how many holdings you need to realize diversification’s benefit
- Especially true if you hold mutual funds and ETFs
- Too many holdings makes it hard to keep track of the big picture

The “3 Fund” Portfolio is beautifully diversified

- Vanguard Total Stock Market: 4,052 stocks
- Vanguard Total Int’l Stock Market: 7,764 stocks
- Vanguard Total Bond Market: 17,071 bonds

Conclusions

- Diversification helps lower volatility so you can stick with your plan
- Diversification across asset classes, account types especially critical in retirement
- Diversification is great but don't overdo it; index-fund owners are diversified (within those asset classes)

10 Minute Break!

Rick Ferri, MS (finance), CFA

- President of The Bogle Center
- 35 years as a financial advisor
- Founder of two successful financial advisory firms
- Author of 7 books on investing
- Marine aviator
- 9,547 posts on Bogleheads Forum

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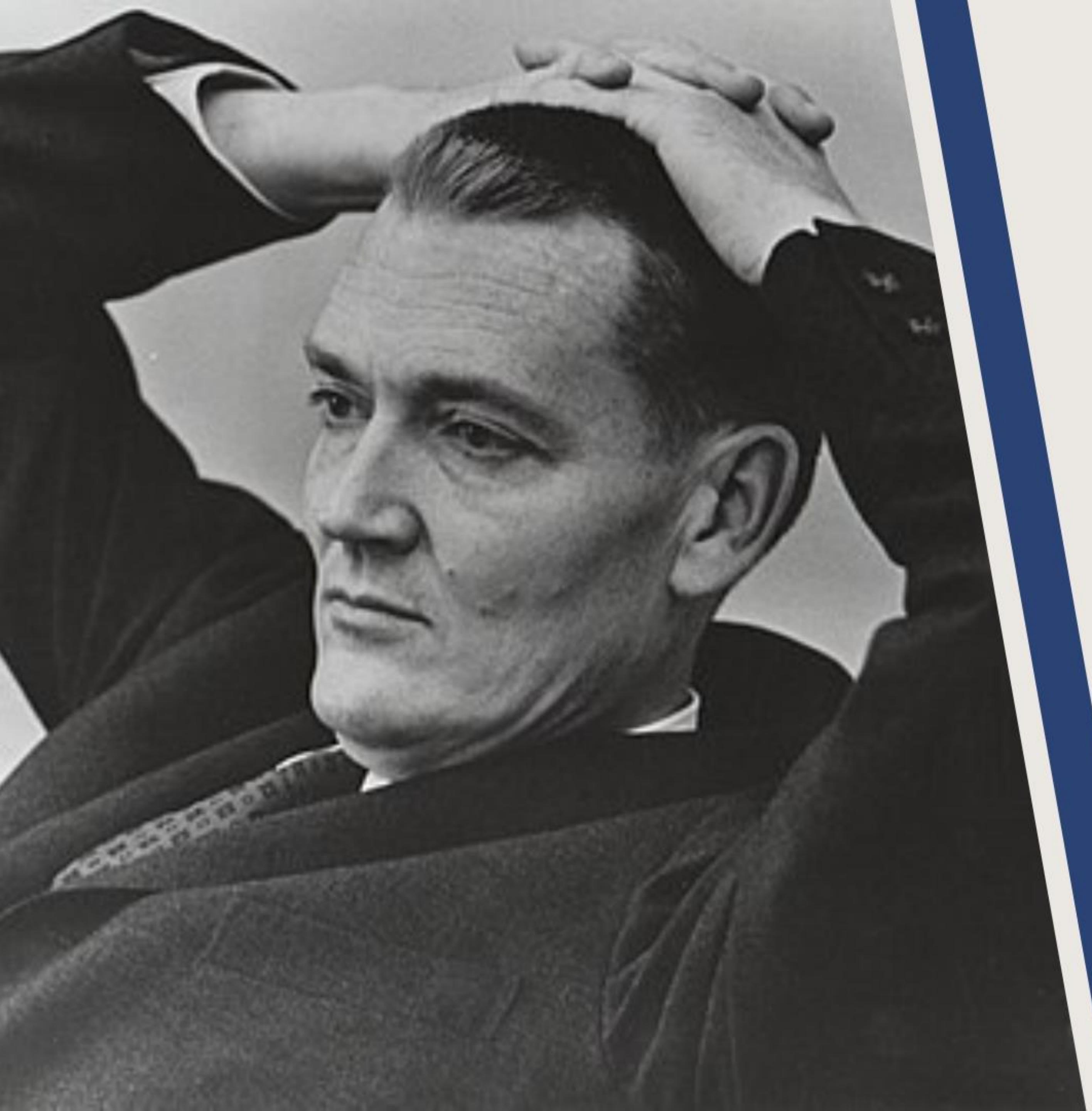

5
Never Try to Time the Market

Rick Ferri, CFA

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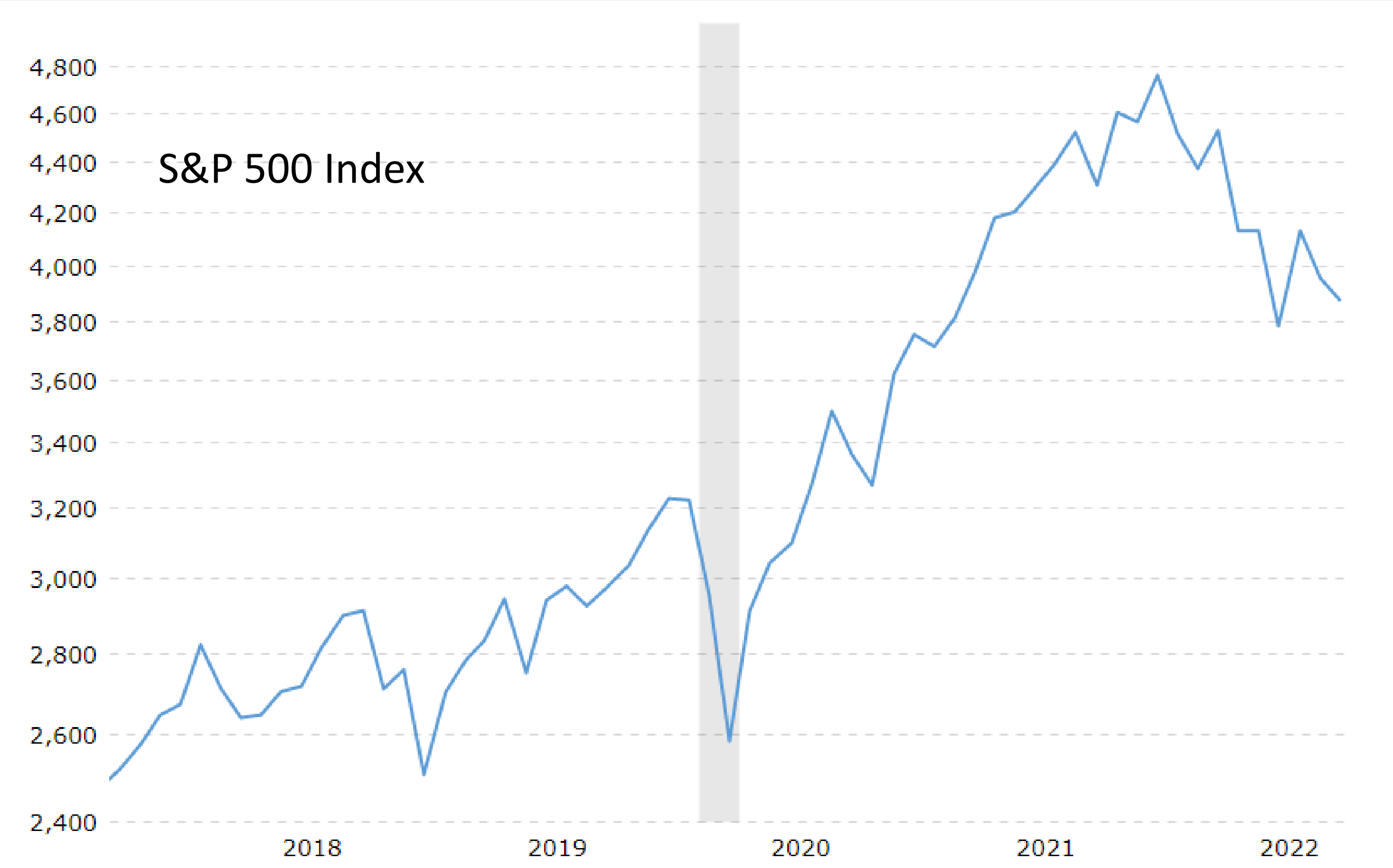
Stock Prices Fluctuate Unpredictably



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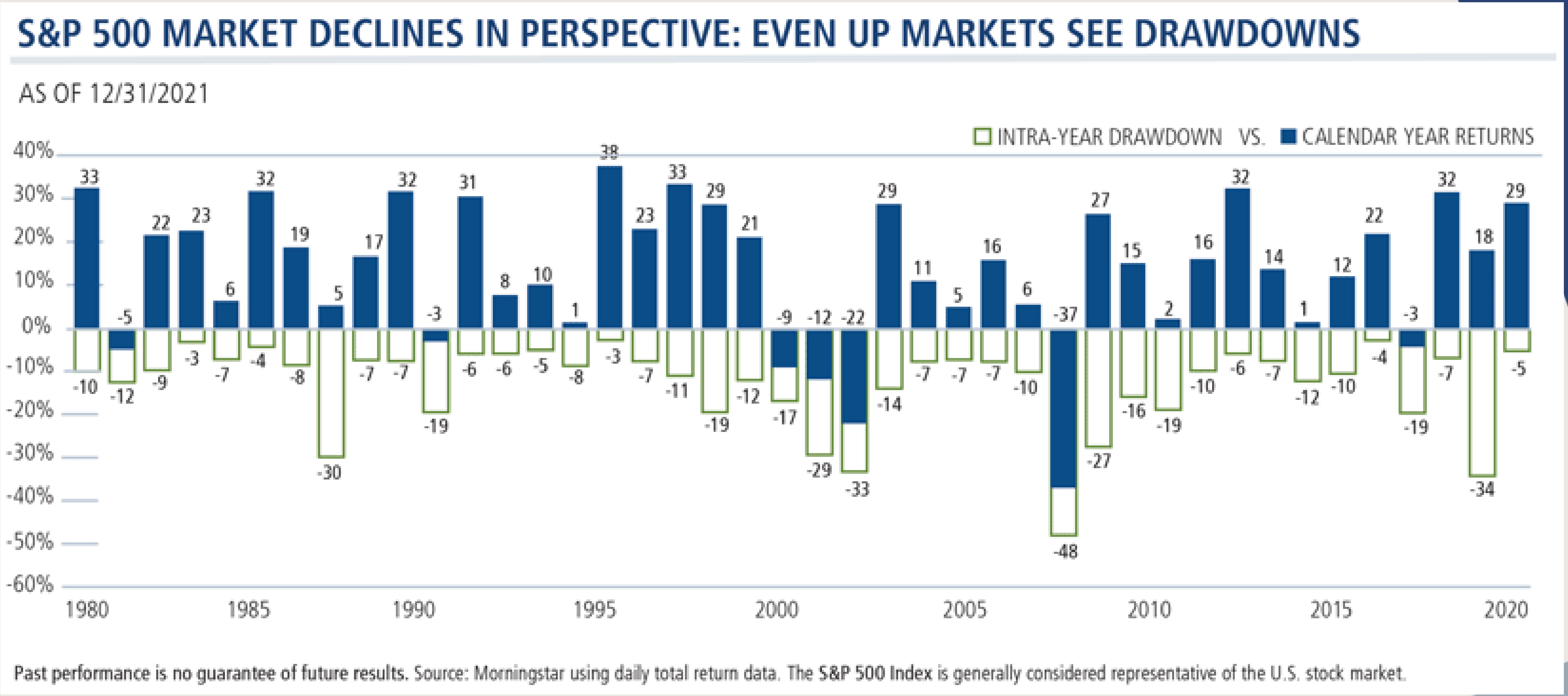
Every Year there are Rallies and Declines



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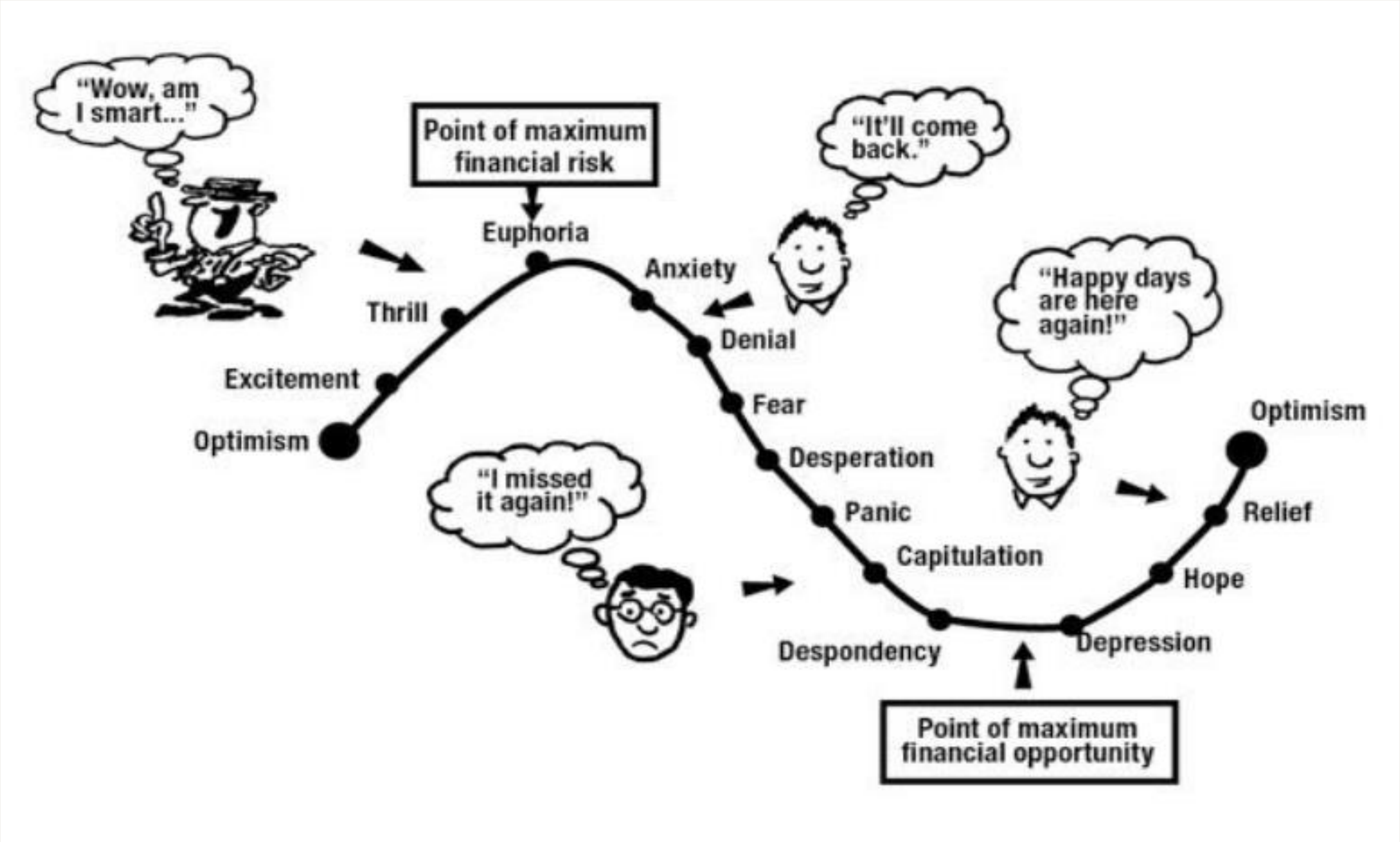
We React Emotionally to Both



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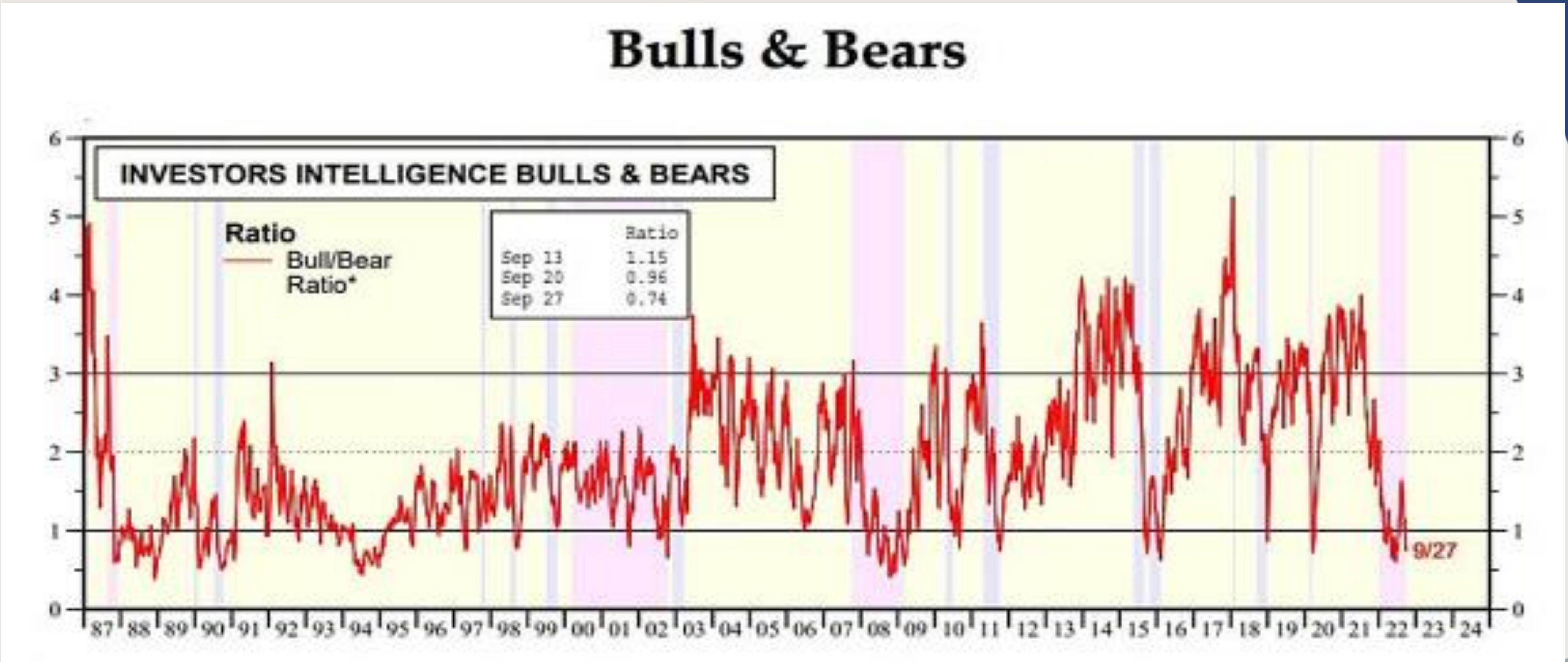
Our Predictions are Based on Recency



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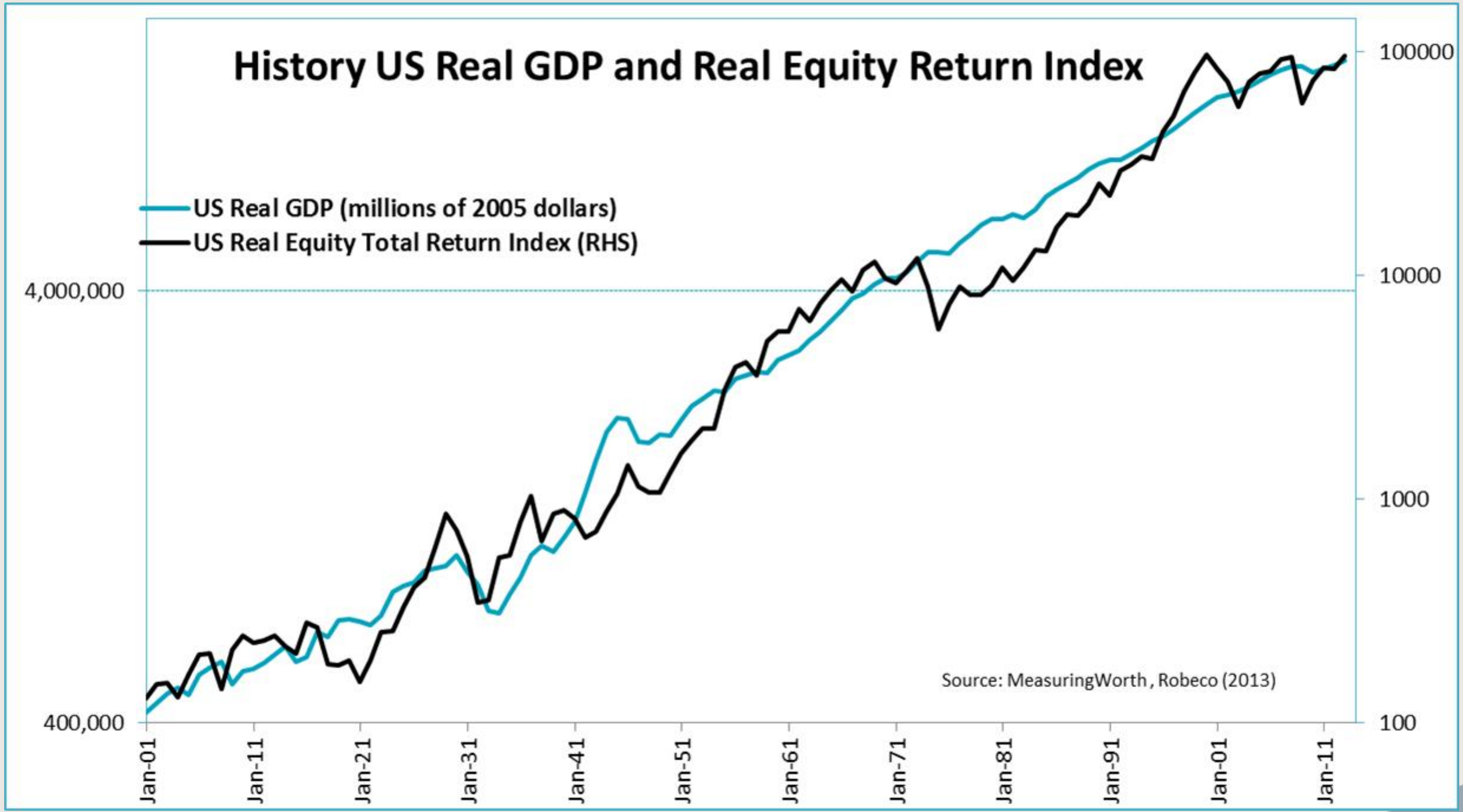
Long-term Returns and Economic Growth



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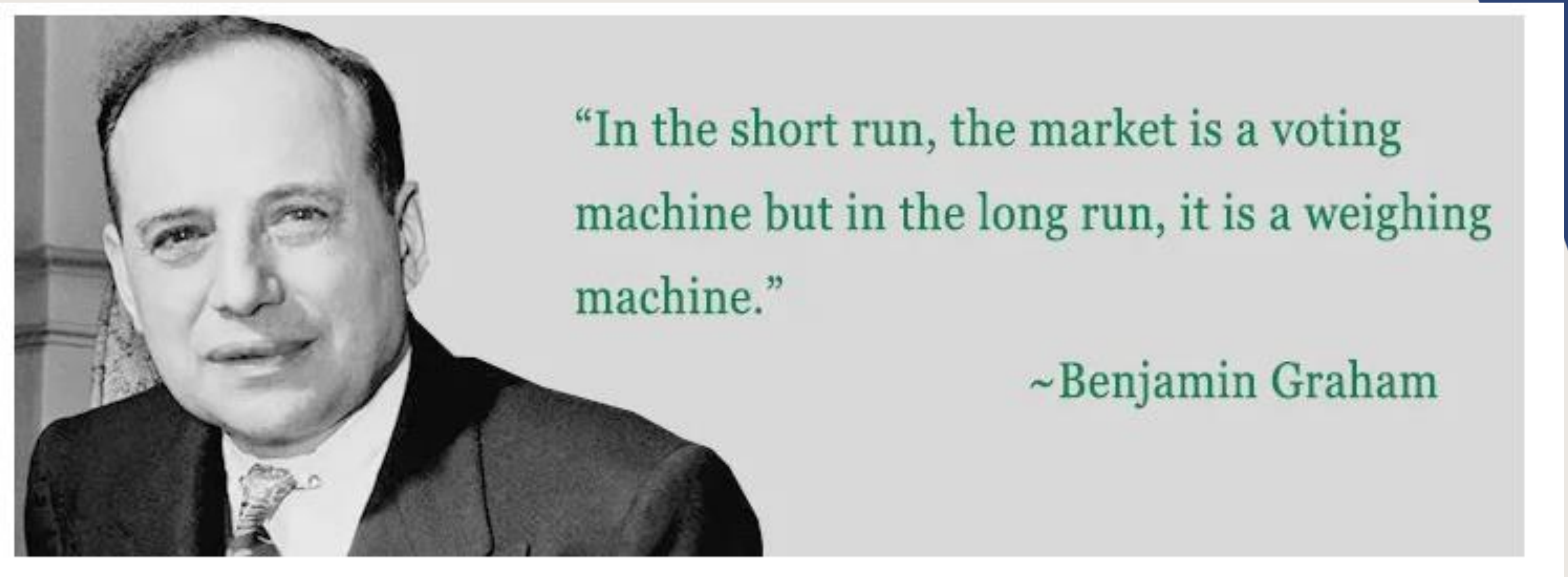

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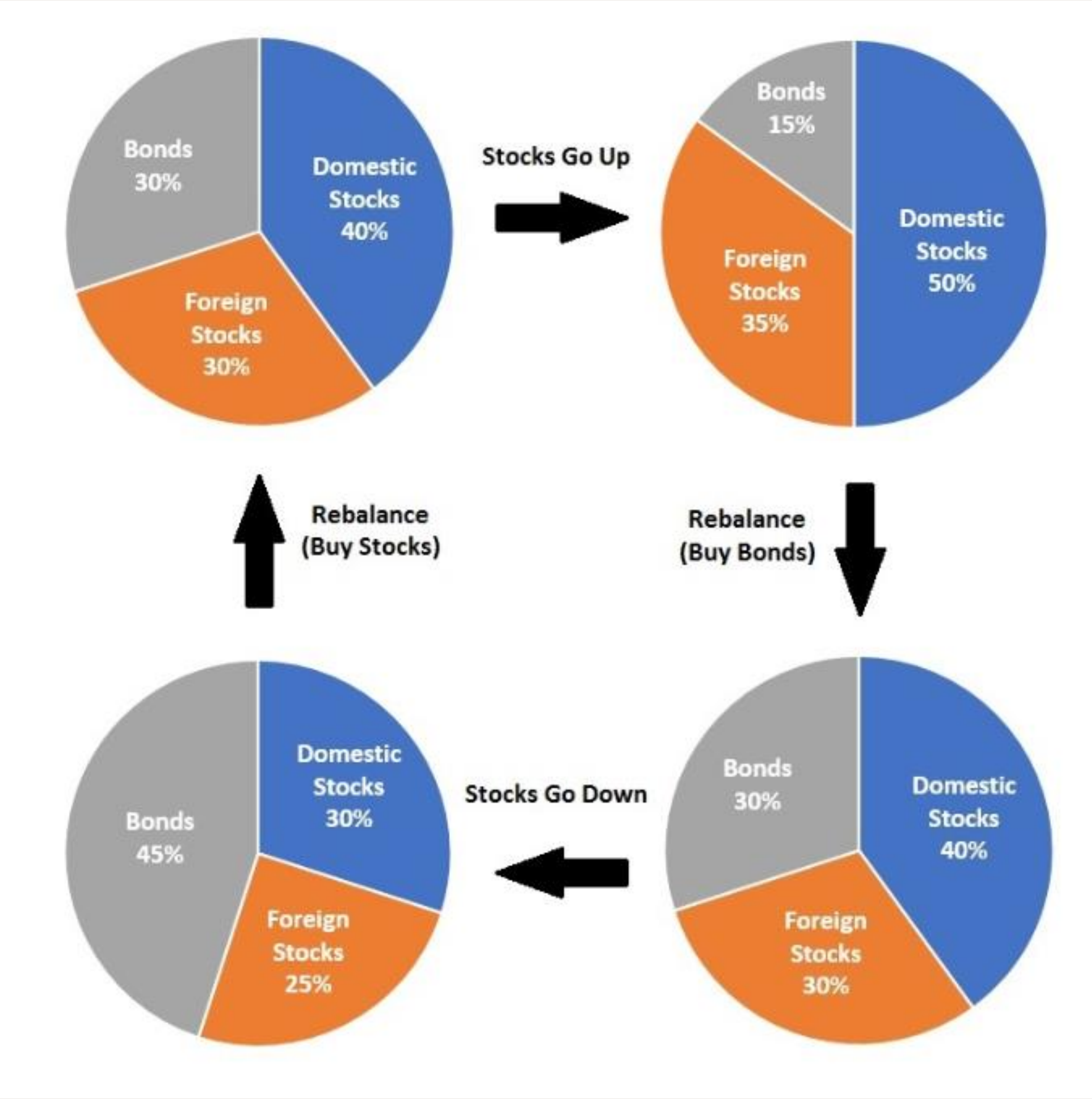
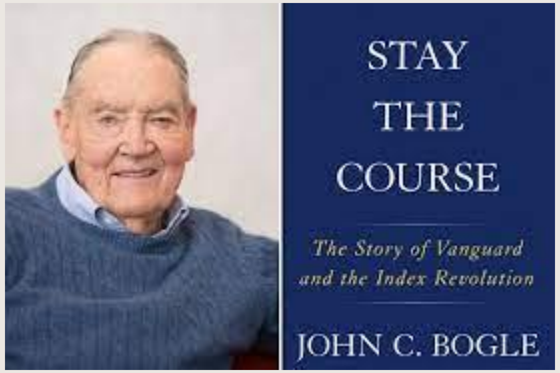


Invest when you can, rebalance, and "Stay the Course!"



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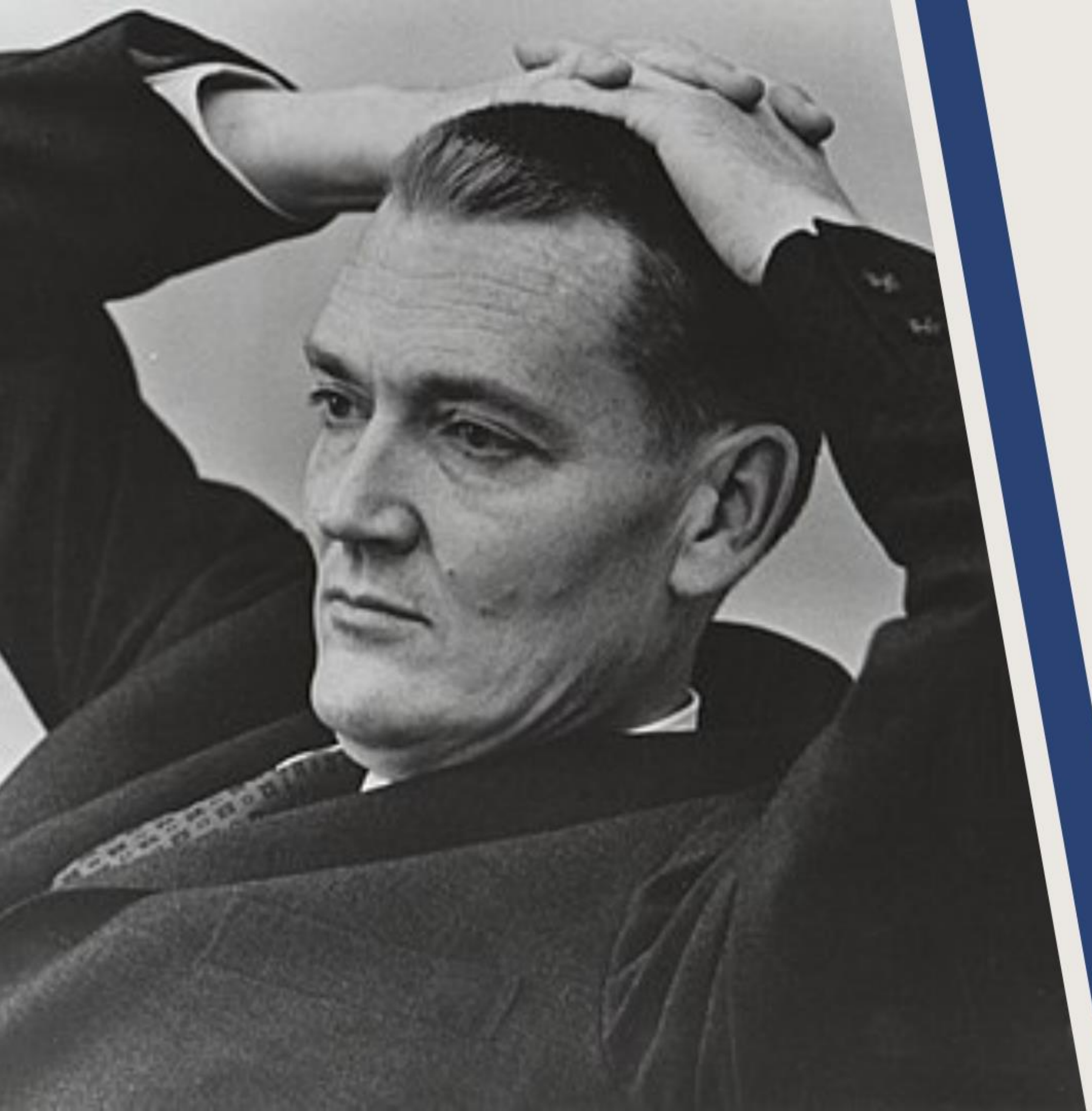

6
Use Index Funds When Possible

Rick Ferri, CFA

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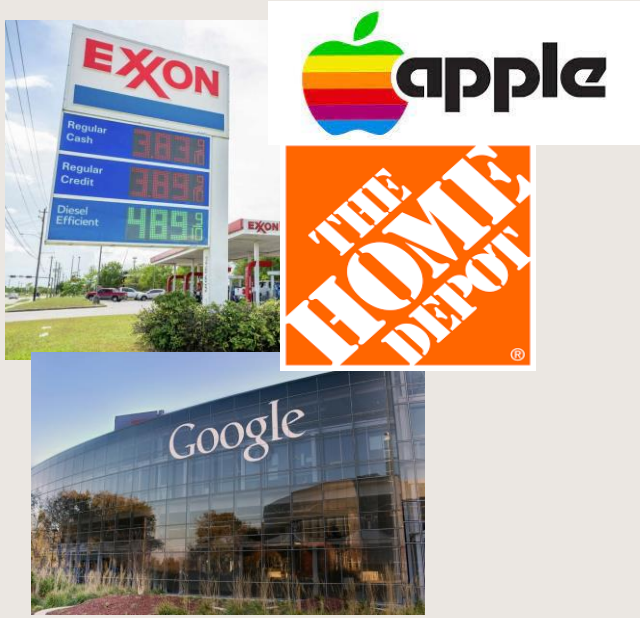
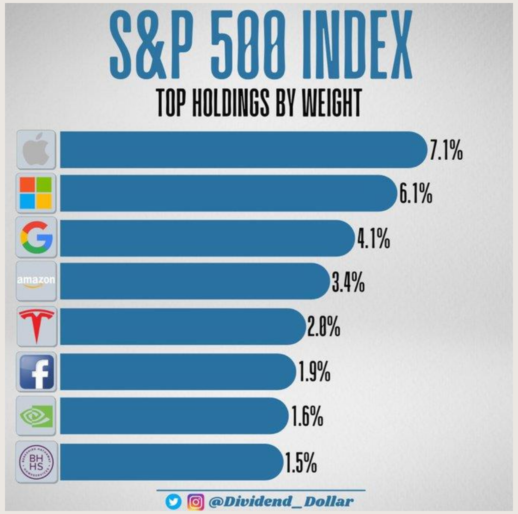
Markets, Indexes, and Index Funds

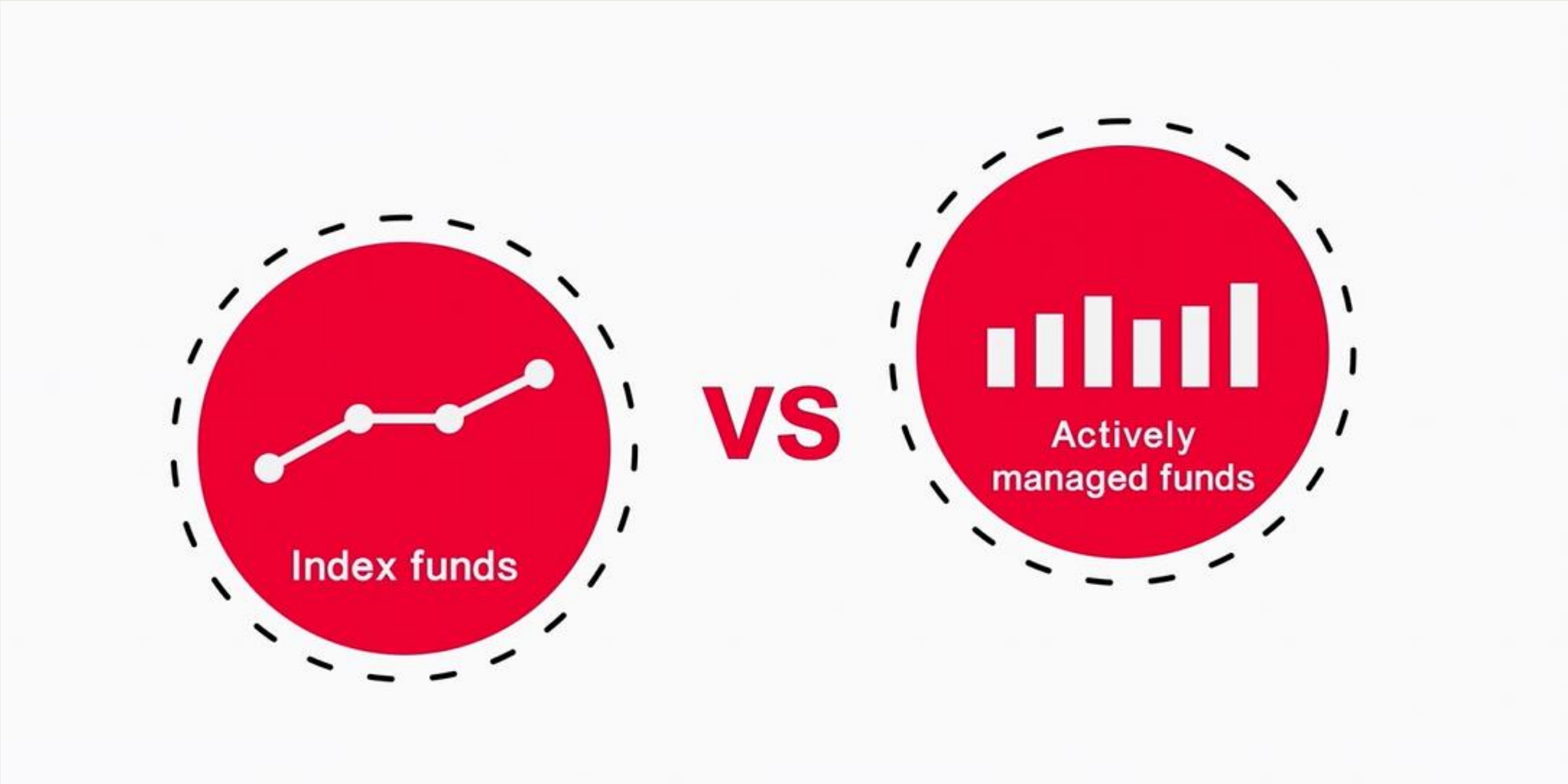




Vanguard®

Vanguard 500 Index Fund

Index Funds versus Active Funds



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Index Funds Beat Active Funds Often

SPIVA Results for 2022

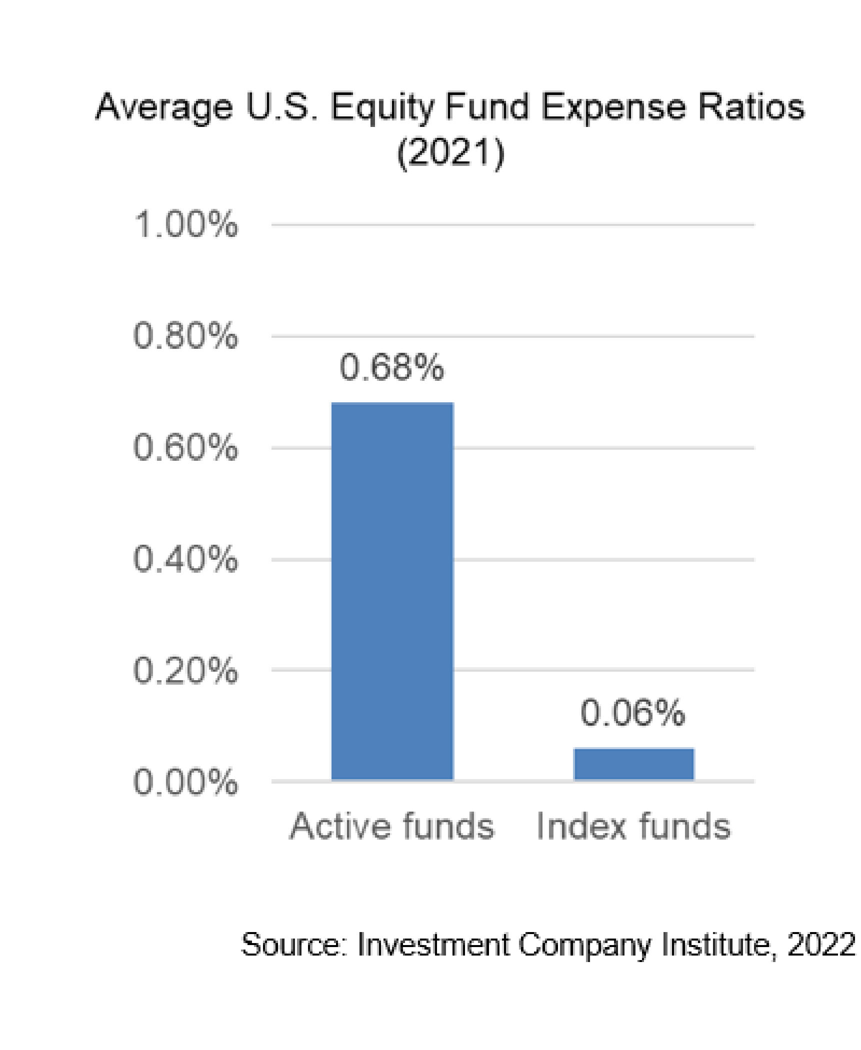
Active Underperformance Continues

Percentage of U.S. Equity Funds Underperforming Index

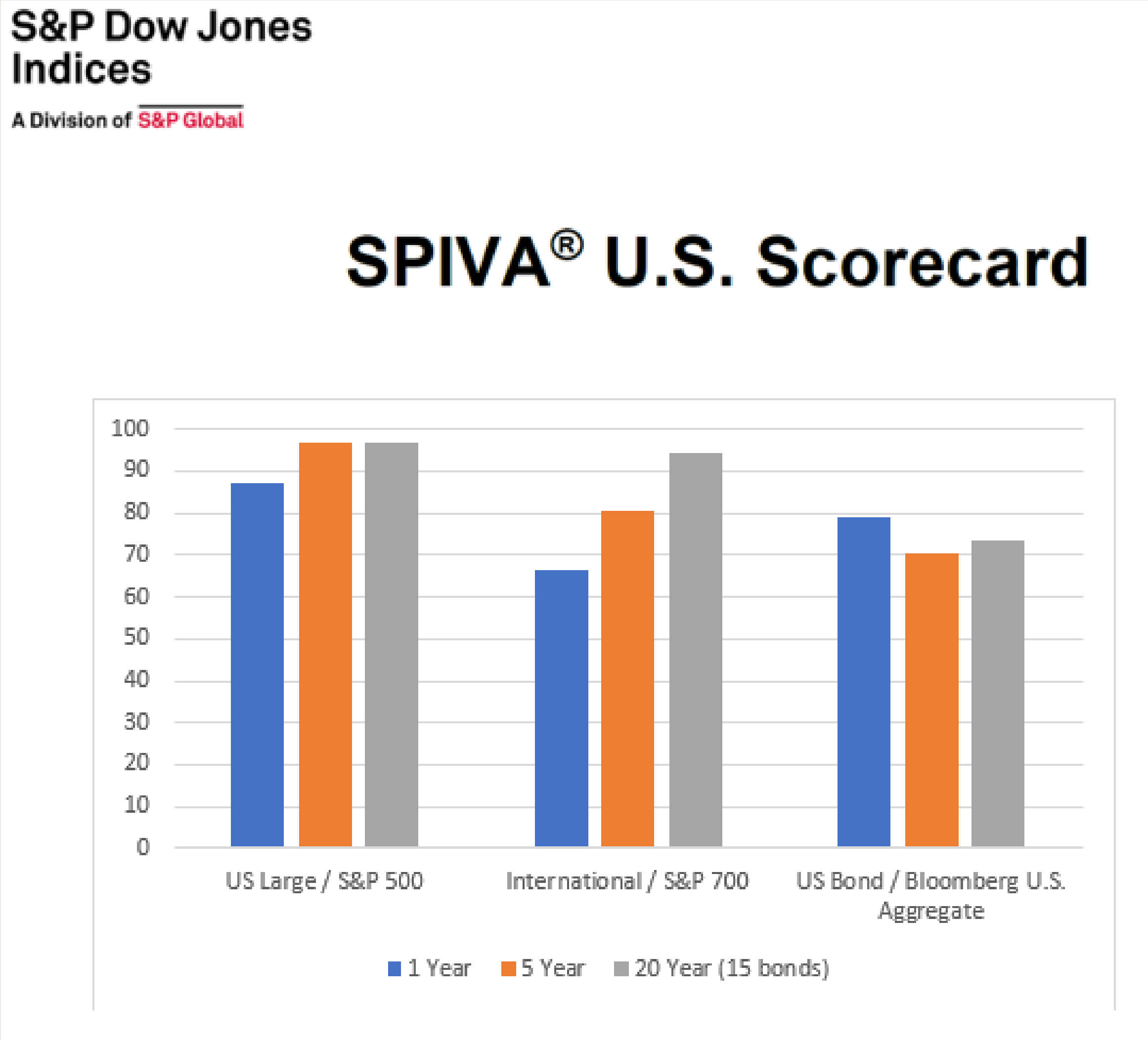
Fund Category	Comparison Index	YTD	1 Year	5 Years	20 Years
Large Cap Funds	S&P 500	51%	55%	84%	95%
Mid Cap Funds	S&P MidCap 400	54%	54%	58%	94%
Small Cap Funds	S&P SmallCap 600	63%	55%	74%	94%

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2022. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Index Funds have Low Expenses



Index Funds Beat Most Active Everywhere



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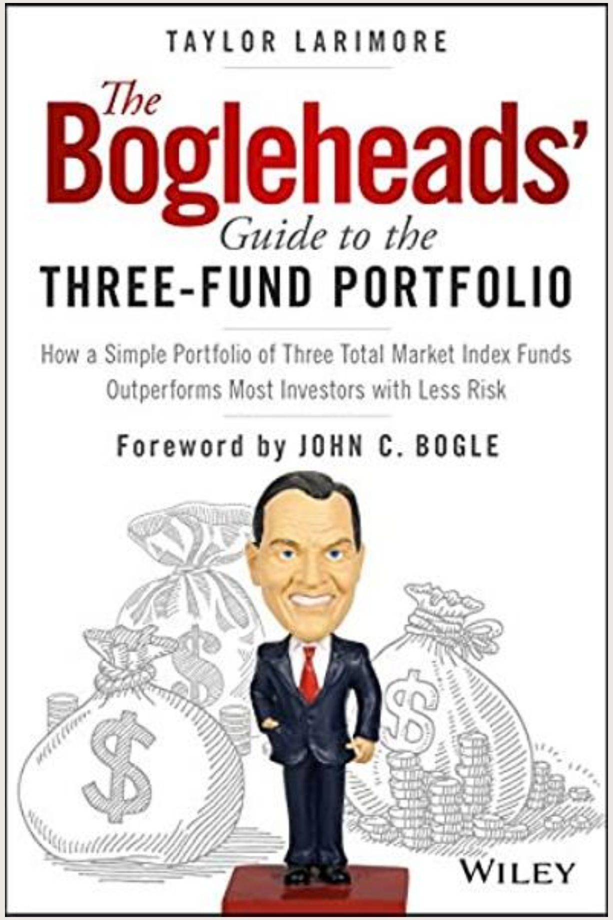
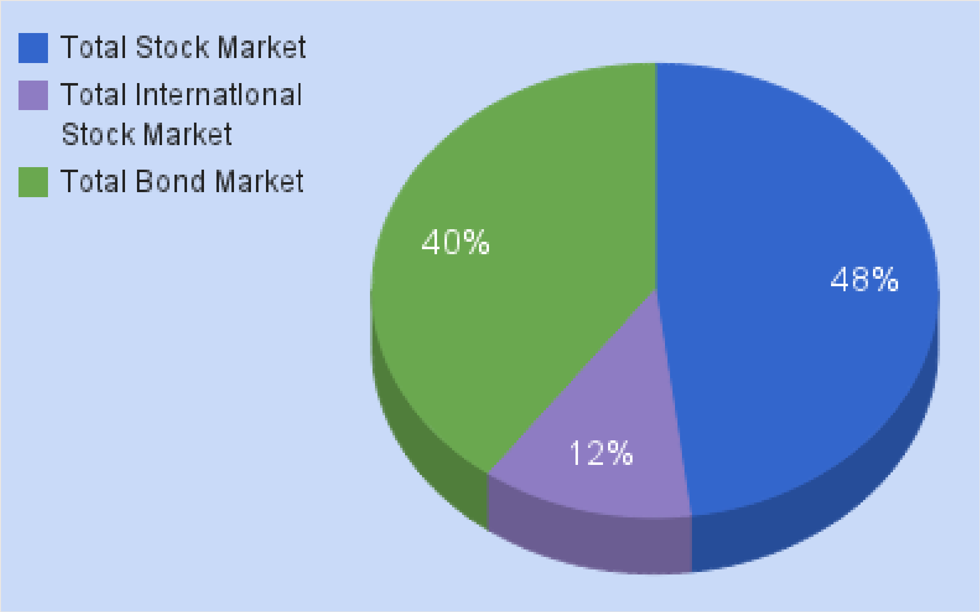
All Index Funds - All the Time





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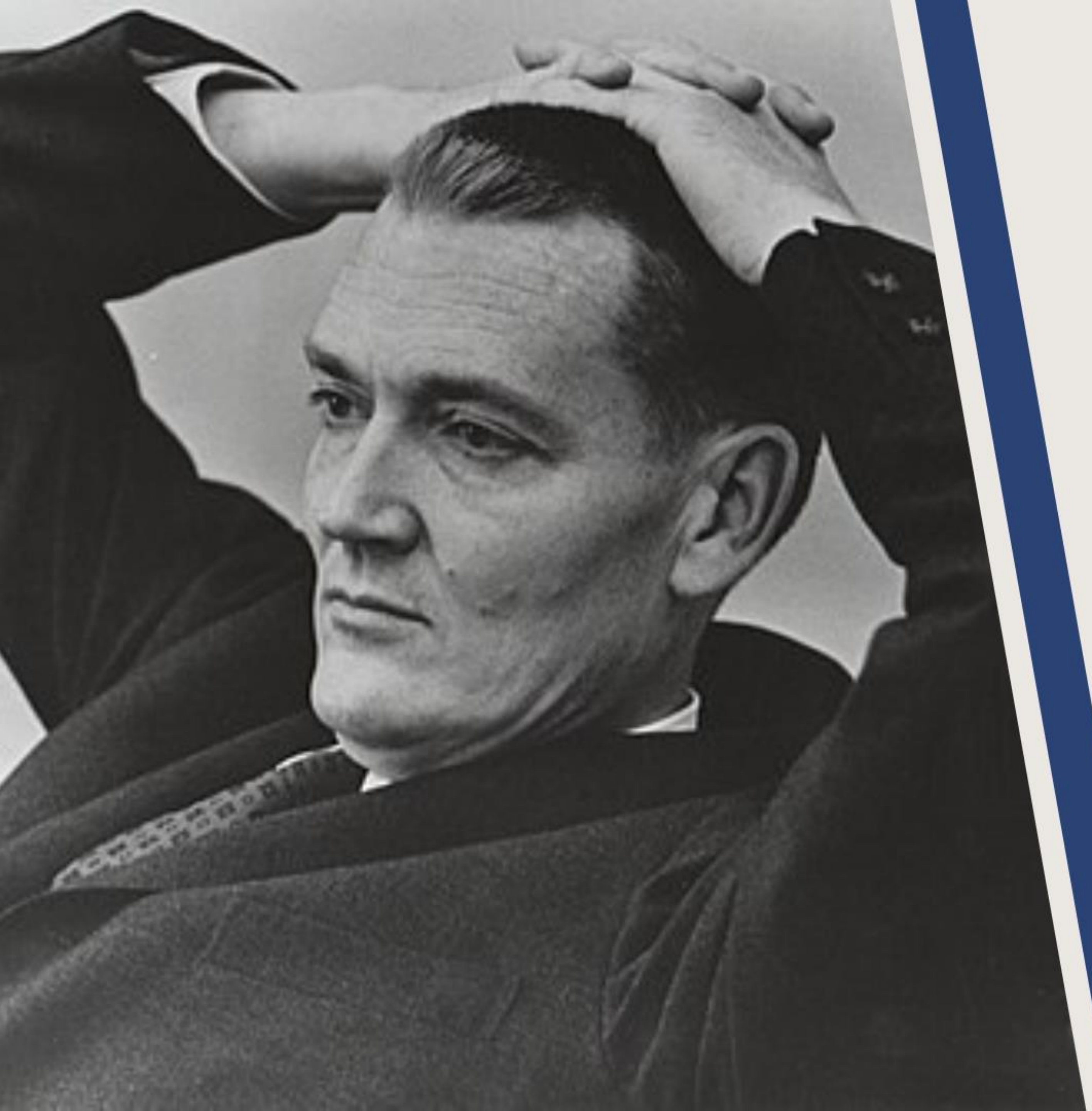

7
Keep Costs Low

Allan Roth, MBA, CPA, CFP

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Two things you must always understand

- Get real!
- Arithmetic

Get real!

Which is better?

- Earning 10% when inflation is 12%.
- Earning 3% when inflation is 2%.

Which do you think makes people happier?

Get real!

- Stocks may have a real (inflation adjusted) return of 5% annually.
- High quality bonds perhaps 1% annually.
- So a 50/50 portfolio may return about 3% annually.

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Arithmetic

- **3 – 2 = 1**

- **William Sharpe – Arithmetic of Active Management**
  - Before costs, the return on the average actively managed dollar will equal the return on the average passively managed dollar.
  - After costs, the return on the average actively managed dollar will be less than the return on the average passively managed dollar.

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The Doctor Analogy

- If you needed open heart surgery, you would:
  a) Find the cheapest heart surgeon.
  b) Find the best heart surgeon.

What’s wrong with this analogy?

How much of that 3% do you want to give up?

Fees:

- Expense ratios.
- Hidden fees (bid-ask), impact, hedging, etc.
- Advisor fees.
- Emotions.
- Taxes (charged on nominal returns & without selling an active fund even during bear markets).

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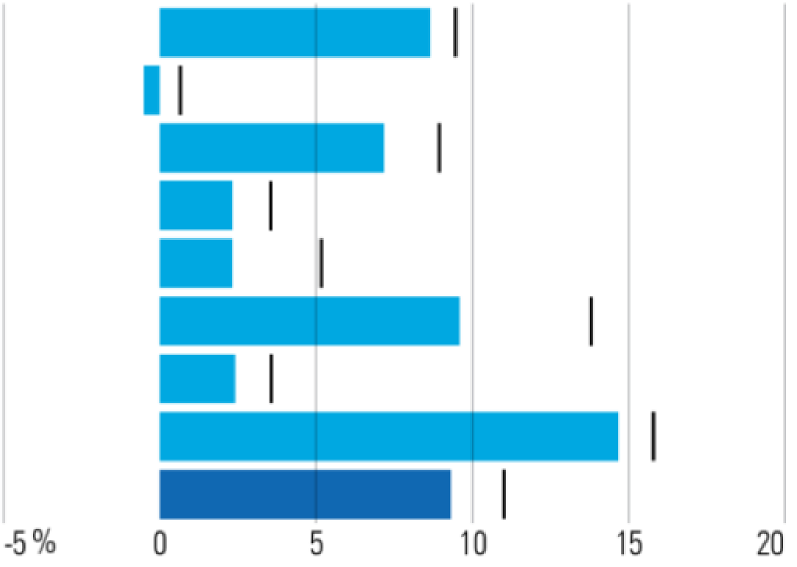
Costs of Emotions

Exhibit 1 The Gap by U.S. Category Group (10-Year Returns)

U.S. Category Group	Investor Return %	Total Return %	Gap
Allocation	8.65	9.43	-0.77
Alternative	-0.52	0.65	-1.16
International Equity	7.18	8.93	-1.75
Municipal Bond	2.33	3.54	-1.21
Nontraditional Equity	2.32	5.19	-2.87
Sector Equity	9.59	13.84	-4.25
Taxable Bond	2.41	3.58	-1.17
U.S. Equity	14.67	15.86	-1.19
Overall	**9.31**	**11.04**	**-1.73**



Source: Morningstar Direct. Data as of Dec. 31, 2021. Excludes commodities category group. Gap numbers may not match differences in returns because of rounding.

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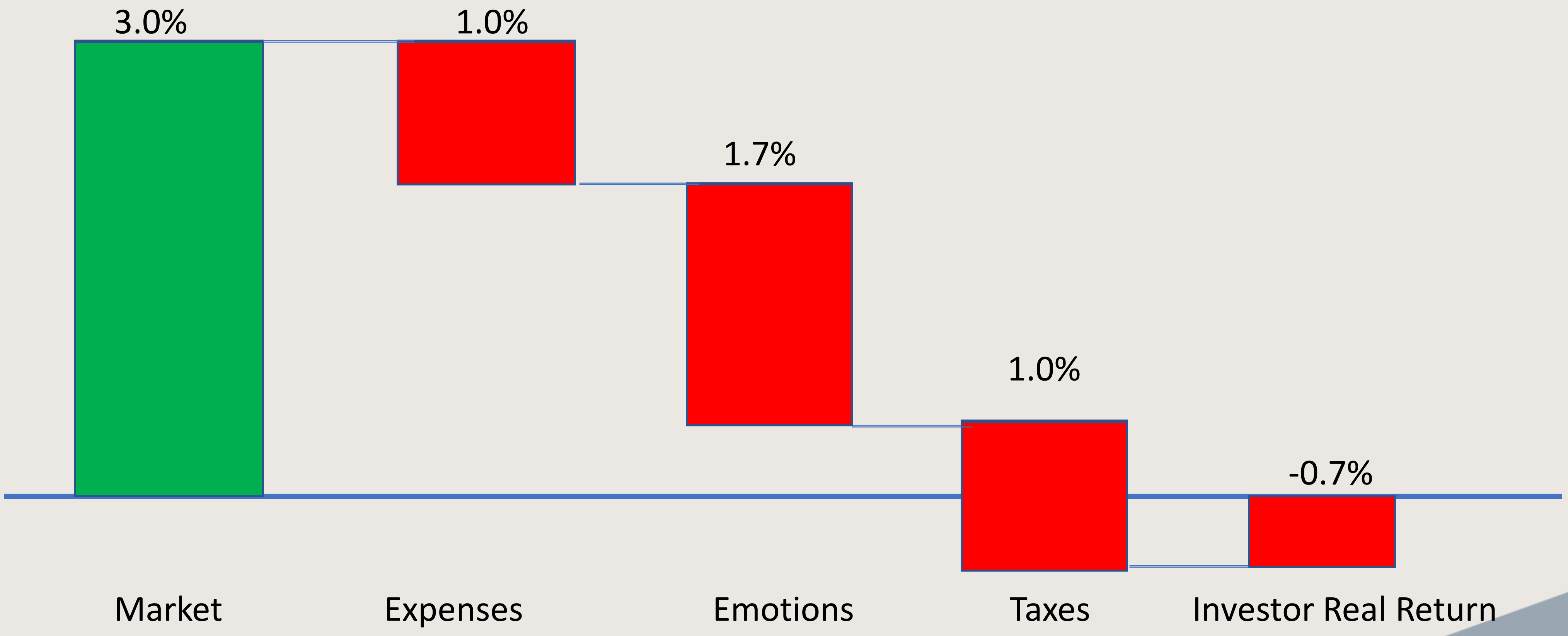
The high costs of expenses and emotions



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Vanguard Total Stock Index Fund (VTI)

• Number of stocks	4,052
• Annual Expense ratio	0.03%
• 10 Year capital gain distributions per share	$0.00

Returns 100% of profits from securities lending to shareholders.

Mathematically, it must beat the average dollar invested in US stocks over any period of time. **Right?**

Then why does Morningstar show over the past year:

- It underperformed its category by 1.70%?
- 73% of mutual funds bested it through 9/16/22?

Trailing Returns Day End | Month End | Quarter End

Total Return %	1-Day	1-Week	1-Month	3-Month	YTD	1-Year
Total Return % (Price)	-0.91	-4.80	-9.99	6.76	-18.81	-14.53
Total Return % (NAV)	-0.90	-4.76	-9.95	6.76	-18.83	-14.51
Category (NAV)	-0.80	-4.62	-9.45	5.25	-17.61	-12.77
Index (NAV)	-0.82	-4.79	-9.90	6.49	-18.87	-14.19
Quartile Rank						
Percentile Rank	72	54	65	13	66	73

I turned to two brilliant people:

William Sharpe – Nobel Laureate
John Rekenthaler – VP Research, Morningstar

Morningstar's methodology for looking at the style of a total stock index fund has it tilted toward growth, and growth badly lagged large and mid-cap.

"The style boxes are a simple descriptive way of viewing and benchmarking performance. This example points out a drawback on the simplicity."
- John Rekenthaler

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VTI is guaranteed to beat the average dollar invested in stocks which translates to a virtual certainty to beat most investors.

"Owning a low-cost, market cap-weighted total index fund is both psychologically and mathematically superior," Rekenthaler concluded.

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People hate to lose money but…

- They hate it even more when they lose more money than their friends and family.

The most important sentence I’ve ever written on investing:

- Minimize expenses and emotions; maximize diversification and discipline.

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Conclusion

- You can have a bad low-cost portfolio but you can't have a good high-cost portfolio.
- John C. Bogle gave us all access to low costs and high diversification.
- Embrace "dumb beta" and avoid most new products, even if academically based.
- Understand what JCB meant by the "tyranny of compounding" of costs and the impact on your financial freedom.

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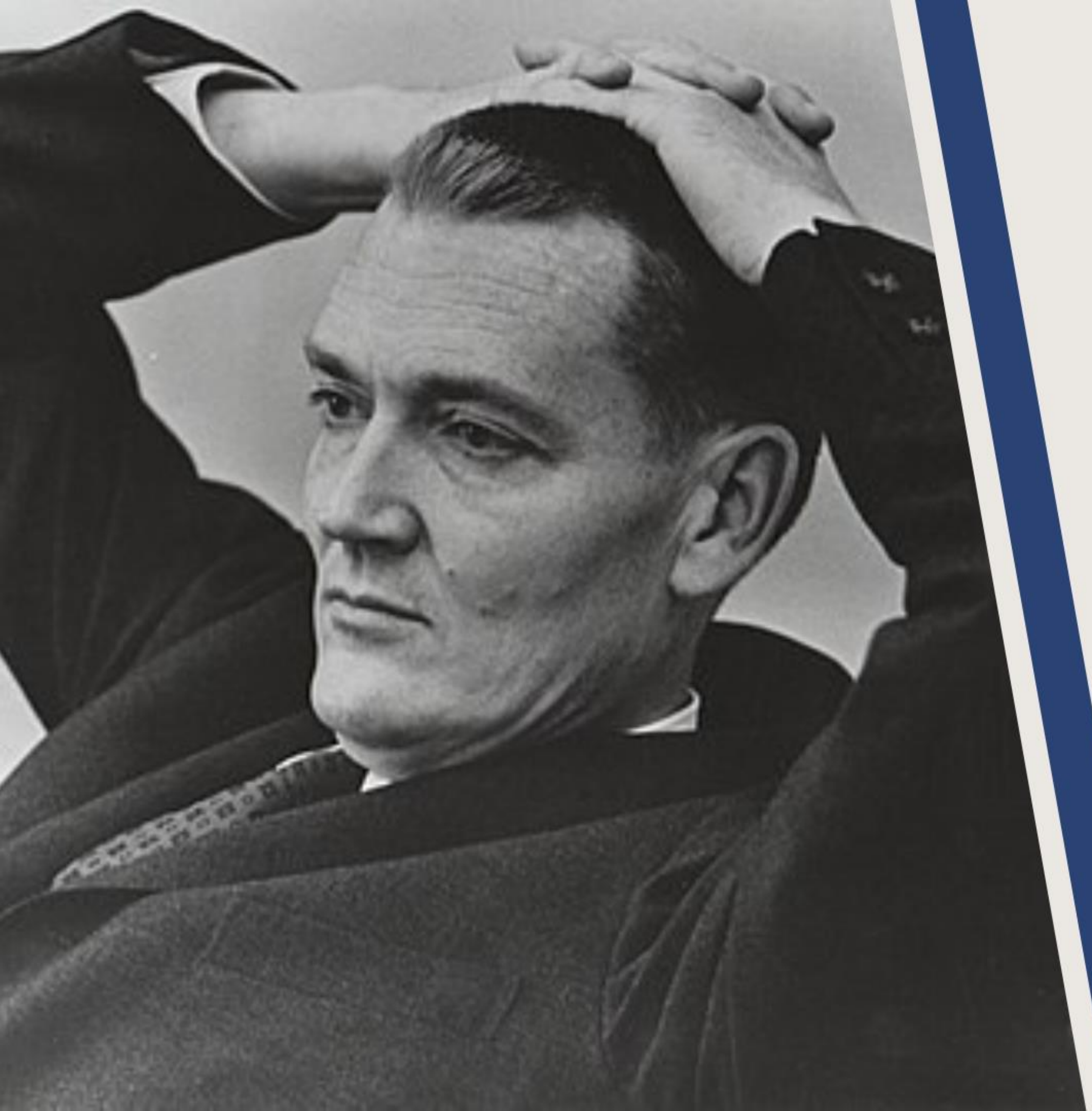
Mike Piper, CPA

- Secretary of The Bogle Center
- Licensed accountant (CO)
- Creator of extremely successful investing blog
- Creator of the best Social Security tool on the web
- Author of 11 Financial Books
- Top-rated speaker at conferences
- 4,054 posts on the Bogleheads Forum
- Most humble person at this conference



8
Minimize Taxes

Mike Piper, CPA

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Minimize Taxes

1. Max out retirement accounts, if cash flow is sufficient.

2. When investing in taxable accounts, use tax-efficient funds.

Minimize Taxes

1. Max out retirement accounts, if cash flow is sufficient.

2. When investing in taxable accounts, use tax-efficient funds.

Minimize Taxes:
Max Out Retirement Accounts

Maximum contribution each year to Roth IRA (or back-door Roth IRA).

Maximum contribution to 401(k), 403(b), or 457(b) if you have access to such a plan.

Minimize Taxes: Max Out Retirement Accounts

Why max out retirement accounts?

Taxable accounts incur "tax drag."

- Interest is taxable every year.
- Dividends taxable every year.
- Capital gains taxable upon sale.

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Minimize Taxes: Max Out Retirement Accounts

Why max out retirement accounts?

Net result: taxable accounts have a lower rate of return.

Even a small difference in return has a **big** impact over time. (Just like expense ratios.)

Minimize Taxes:
Max Out Retirement Accounts

Why max out retirement accounts?

Retirement accounts have no tax drag.

Actually receive the full rate of return.

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Minimize Taxes:
Max Out Retirement Accounts

For those planning FIRE (retiring before 59.5), it still makes sense to max out retirement accounts.

Retiring early usually means saving more than annual contribution limits. So you'll have taxable assets anyway.

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Minimize Taxes:
Max Out Retirement Accounts

Roth IRA – contributions come out tax-free, penalty-free at any age.

Roth 401(k) after separation from service: rollover to Roth IRA.

Age-55 rule

Series of Substantially Equal Periodic Payments

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Minimize Taxes

1. Max out retirement accounts, if cash flow is sufficient.

2. When investing in taxable accounts, use tax-efficient funds.

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Minimize Taxes:
Tax-Efficiency in Taxable Accounts

After deciding your allocation, consider what goes where (asset **location**).

Fill your taxable account with your most tax-efficient holdings.

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Minimize Taxes: Tax-Efficiency in Taxable Accounts

Look for low portfolio turnover.

Turnover creates capital gain distributions.

Higher turnover means they're more likely to be short-term.

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Minimize Taxes: Tax-Efficiency in Taxable Accounts

Safer bonds = lower yields = more tax-efficient.

- Shorter-term bonds are more tax-efficient than longer-term bonds.

- Higher credit quality bonds are more tax-efficient than bonds with lower credit quality.

Minimize Taxes: Tax-Efficiency in Taxable Accounts

Treasury bonds are tax-efficient due to lower yields.

Treasury bonds are also exempt from state income tax.

Municipal ("muni") bonds are exempt from federal income tax.

Minimize Taxes: Tax-Efficiency in Taxable Accounts

Qualified dividends and long-term capital gains are taxed at lower rates than bond interest.

The lower interest rates are relative to dividend yields, the more tax-efficient bonds become relative to stocks.

Minimize Taxes:
Tax-Efficiency in Taxable Accounts

Tax-efficient:

- "Total stock market" index funds/ETFs
- Treasury bonds
- Muni bonds
- Shorter-term bonds

Tax-inefficient:

- Actively managed stock funds with high turnover
- High-yield bonds
- "All-in-one" funds

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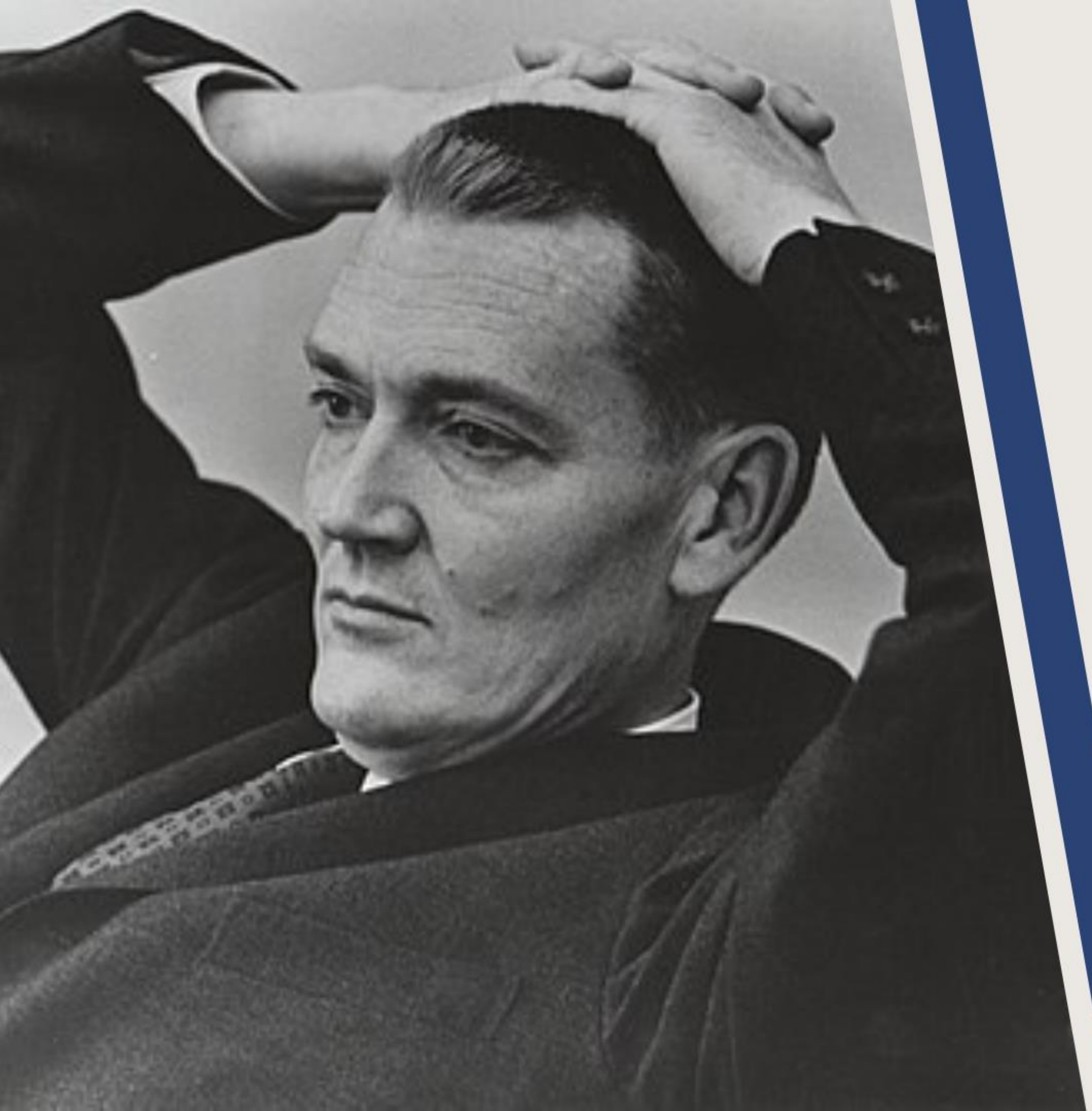
Minimize Taxes

1. Max out retirement accounts, if cash flow is sufficient.

2. When investing in taxable accounts, use tax-efficient funds.

10 Minute Break!



9
Invest with Simplicity

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Invest with Simplicity

Allan Roth's "Second-Grader Portfolio"

- Total stock market index fund (or ETF)
- Total international stock index fund (or ETF)
- Total bond market index fund (or ETF)

Extremely well diversified. Thousands of stocks, from around the world. Diversified collection of bonds.

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Invest with Simplicity

One-fund portfolio:

- Target-date fund
- Vanguard LifeStrategy Fund (or similar)
- Balanced fund

Invest with Simplicity

One-fund portfolio, caveats and considerations:

- Still important that it has low expense ratio.
- Check the asset allocation (and glide path) rather than relying on the name!

Invest with Simplicity

One-fund portfolio, caveats and considerations:

- ***Not*** a good choice for taxable accounts.
  - Use taxable bonds rather than tax-exempt.
  - Get in the way of asset location.
  - Turnover due to buying/selling underlying funds.

Invest with Simplicity

Why invest with simplicity?

It's not that rebalancing is especially hard.

But simpler portfolios do save you time. And a one-fund portfolio completely eliminates the job of rebalancing.

Invest with Simplicity

Morningstar's Mind the Gap

Looks at reported performance for each fund.

Calculates "Investor Return" for each fund.

The "gap" between the two is a measure of how well investors do with the timing of their purchases.

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Invest with Simplicity

Morningstar's Mind the Gap

(10 years ending 12/31/2021)

- **Allocation: -0.77**
- Alternative: -1.16
- International equity: -1.75
- Municipal bond: -1.21
- Nontraditional equity: -2.87
- **Sector equity: -4.25**
- Taxable bond: -1.17
- US equity: -1.19

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Invest with Simplicity

Morningstar's Mind the Gap

Investors in "allocation" funds consistently do well (small gap).

Investors in sector funds consistently do poorly (large gap).

Invest with Simplicity

Morningstar's Mind the Gap

Large-blend: -0.75

Large-growth: -1.29

Large-value: -1.27

Invest with Simplicity

Why invest with simplicity?

Yes, it saves you time. But that's not the biggest benefit.

Biggest benefit is that it makes it easier to stick with the plan.

Invest with Simplicity

"Focus on holding a small number of widely diversified funds. As the fund industry has grown, asset-management firms have rolled out more and more highly specialized funds. [...] But investors have fared far better by keeping things simple and sticking with plain-vanilla, broadly diversified funds."

-Morningstar *Mind the Gap 2022*

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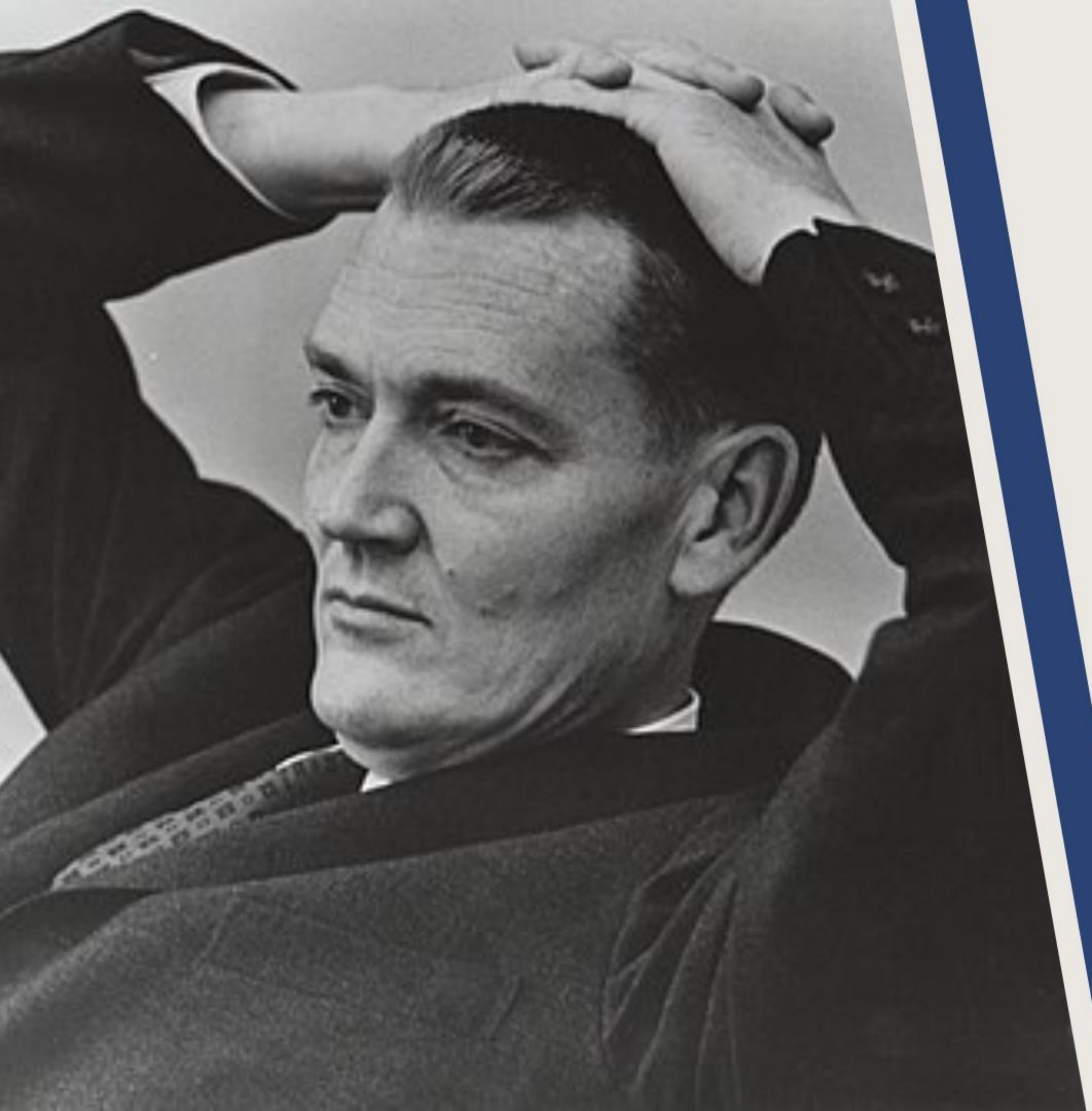
Invest with Simplicity

"Funds that offer built-in asset-class diversification also excelled in our study. […] Not only are these funds easy to use, but they're also easy to live with. Investors tend to buy and hold them for long periods or make investments on a regular schedule that enforces investment discipline and helps them avoid the temptations—and pitfalls—of trading at the wrong time."

-Morningstar *Mind the Gap 2022*



10 Stay the Course

James Dahle, MD

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Stay the Course!

“Stay the course. No matter what happens, stick to your program. I’ve said “Stay the course” a thousand times, and I meant it every time. It is the most important single piece of investment wisdom I can give to you.”
– John C. Bogle

Stay the Course!

“Press on regardless”
– John C. Bogle

“Don’t do something…just stand there” – John C. Bogle

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What Does Stay the Course Mean?

- Don’t change your plan based on now you feel
  - "Investors should keep their emotions the heck outta the way!”
  - ”Investor emotions plus fund industry promotions equals trouble”
  - “The greatest enemies of the investor are expenses and emotions”
  - “Time is your friend, impulse is your enemy”
- Don’t chase performance
  - “Buying funds based purely on their past performance is one of the stupidest things that an investor can do.”

What Does Stay the Course Mean?

- Don't keep looking for a better plan
  - "The greatest enemy of a good plan is the dream of a perfect plan. Stick to the good plan."
- Be patient
  - "Rely on the ordinary virtues that intelligent, balanced human beings have relied on for centuries: common sense, thrift, realistic expectations, patience, and perseverance."

What Does Stay the Course Mean?

- Don’t sell out at market lows
  - “If you have trouble imagining a 20% loss in the stock market, you shouldn’t be in stocks”
- Selling low just once late in your accumulation phase can be a financial catastrophe

What Does Stay the Course Mean?

- Imagine an investor who sells out of their stocks in each of the following time periods, and then buys back after the recovery to prior high:
- March 2003 (46% permanent loss of capital)
- March 2009 (52% permanent loss of capital)
- September 2011 (19% permanent loss of capital)
- December 2018 (18% permanent loss of capital)
- March 2020 (34% permanent loss of capital)
- October 2022 ?

What Should an Investor Expect?

- Corrections (10%+ drop) occur on average every 19 months
- Bear markets (20%+ drop) occur on average every 3.6 years
- Average bear lasts 10 months
- Bear markets have predicted 26 of the last 15 recessions
- Stocks provide a positive return in 78% of years, including many years in which a correction or bear market occur!
- So an investor's career (30 years accumulating, 30 years decumulating) should involve passing through ~ 39 corrections and ~17 bear markets

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Stay the Course!

“Stay the course….It is the most important single piece of investment wisdom I can give to you.”

– John C. Bogle

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Q&A Panel

- Rick Ferri
- Allan Roth
- Christine Benz
- Mike Piper
- Jim Dahle